

=> fil reg; d\_stat que 19; fil capl;d que nos 110; fil uspatf; d que nos 111  
FILE 'REGISTRY!\_ENTERED AT 10:10:49 ON 16 APR 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

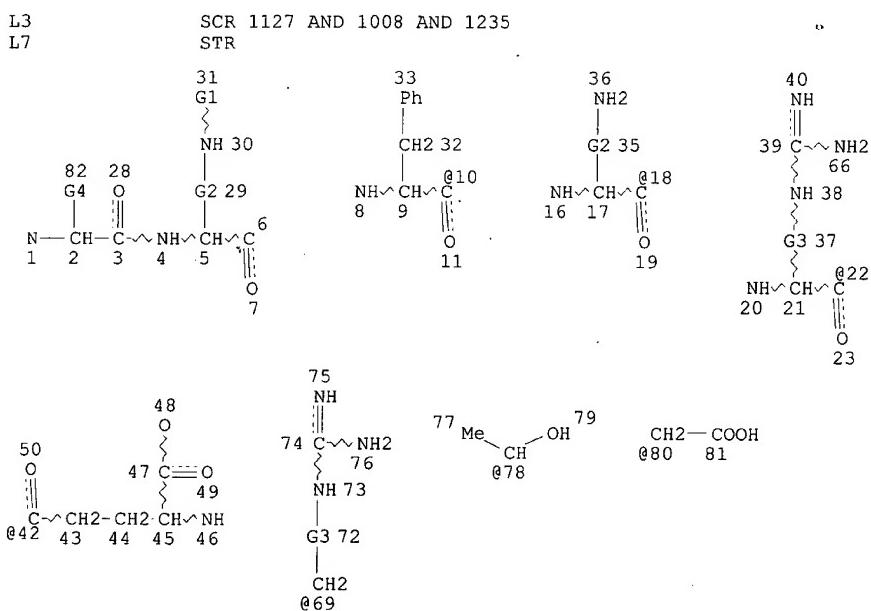
STRUCTURE FILE UPDATES: 15 APR 2003 HIGHEST RN 503084-53-5  
DICTIONARY FILE UPDATES: 15 APR 2003 HIGHEST RN 503084-53-5

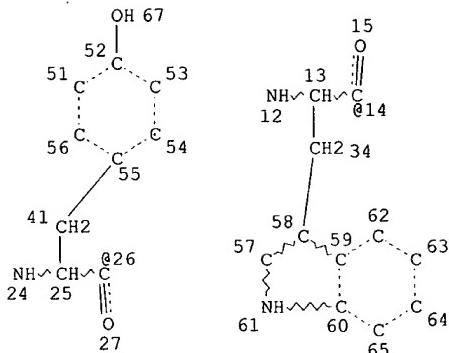
TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>





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VAR G1=42/10/26/18/22/14

REP G2=(4-4) CH2

REP G3=(3-3) CH2

VAR G4=78/80/I-BU/S-BU/69

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 79

STEREO ATTRIBUTES: NONE

(L9 48\_SEA FILE=REGISTRY SSS FUL L7 AND L3)

100.0% PROCESSED 248614 ITERATIONS

SEARCH TIME: 00.00.06

(48 ANSWERS)

FILE 'CAPLUS' ENTERED AT 10:10:49 ON 16 APR 2003  
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FILE COVERS 1907 - 16 Apr 2003 VOL 138 ISS 16  
 FILE LAST UPDATED: 15 Apr 2003 (20030415/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

L3 SCR 1127 AND 1008 AND 1235  
L7 STR  
L9 48 SEA FILE=REGISTRY SSS FUL L7 AND L3  
L10 11 SEA FILE=CAPLUS ABB=ON L9

FILE 'USPATFULL' ENTERED AT 10:10:49 ON 16 APR 2003  
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Apr 2003 (20030415/PD)  
FILE LAST UPDATED: 15 Apr 2003 (20030415/ED)  
HIGHEST GRANTED PATENT NUMBER: US6550063  
HIGHEST APPLICATION PUBLICATION NUMBER: US2003070199  
CA INDEXING IS CURRENT THROUGH 15 Apr 2003 (20030415/UPCA)  
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Apr 2003 (20030415/PD)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2003  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2003

>>> USPAT2 is now available. USPATFULL contains full text of the <<<  
>>> original, i.e., the earliest published granted patents or <<<  
>>> applications. USPAT2 contains full text of the latest US <<<  
>>> publications, starting in 2001, for the inventions covered in <<<  
>>> USPATFULL. A USPATFULL record contains not only the original <<<  
>>> published document but also a list of any subsequent <<<  
>>> publications. The publication number, patent kind code, and <<<  
>>> publication date for all the US publications for an invention <<<  
>>> are displayed in the PI (Patent Information) field of USPATFULL <<<  
>>> records and may be searched in standard search fields, e.g., /PN, <<<  
>>> /PK, etc. <<<  
  
>>> USPATFULL and USPAT2 can be accessed and searched together <<<  
>>> through the new cluster USPATALL. Type FILE USPATALL to <<<  
>>> enter this cluster. <<<  
  
>>> Use USPATALL when searching terms such as patent assignees, <<<  
>>> classifications, or claims, that may potentially change from <<<  
>>> the earliest to the latest publication. <<<

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L9 48 SEA FILE=REGISTRY SSS FUL L7 AND L3  
L11 2 SEA FILE=USPATFULL ABB=ON L9

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FILE 'CAPLUS' ENTERED AT 10:10:53 ON 16 APR 2003  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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FILE 'USPATFULL' ENTERED AT 10:10:53 ON 16 APR 2003  
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PROCESSING COMPLETED FOR L10  
PROCESSING COMPLETED FOR L11  
L13 12 DUP REM L10 L11 (1 DUPLICATE REMOVED)

ANSWERS '1-11' FROM FILE CAPLUS  
 ANSWER '12' FROM FILE USPATFULL

=> d ibib abs hitstr 1-12; fil cao; d que nos 112; fil home

L13 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1  
 ACCESSION NUMBER: 2002:294253 CAPLUS  
 DOCUMENT NUMBER: 136:321988  
 TITLE: Lytic peptide prodrugs  
 INVENTOR(S): Yu, Xianxhang; Wagner, Thomas E.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S.  
 Ser. No. 851,422.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002045736	A1	20020418	US 2001-938623	20010827
US 2002077454	A1	20020620	US 2001-851422	20010509
PRIORITY APPLN. INFO.:			US 2001-851422	A2 20010509
			US 2000-203063P	P 20000509
			US 2000-212042P	P 20000616

AB A cytotoxin can be rendered non-toxic by charge neutralizing the amino acids salient to pore assembly and/or sterically inhibiting formation of the peptide's active conformation. In the presence of specific proteases, the inactive peptide or procytotoxin can be activated to assemble into its lytic conformation and selectively destroy a target cell.

IT 374107-26-3P 412966-60-0P 412966-61-1P

412966-62-2P

RL: BCP (Biochemical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

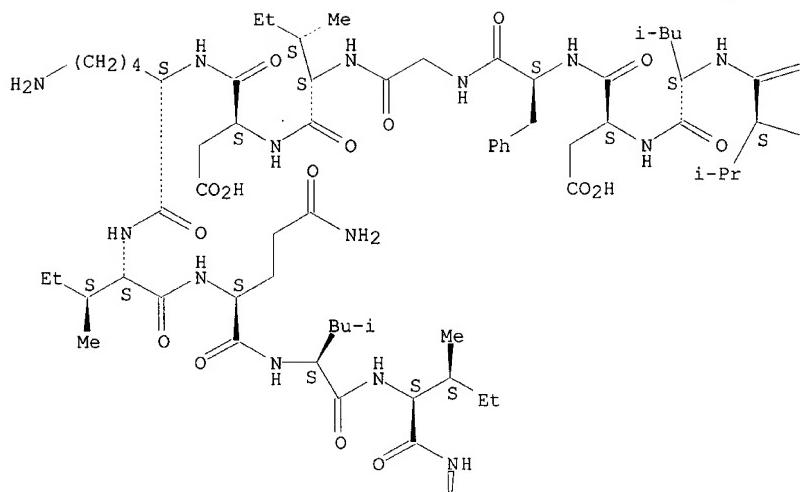
(lytic peptide prodrugs)

RN 374107-26-3 CAPLUS

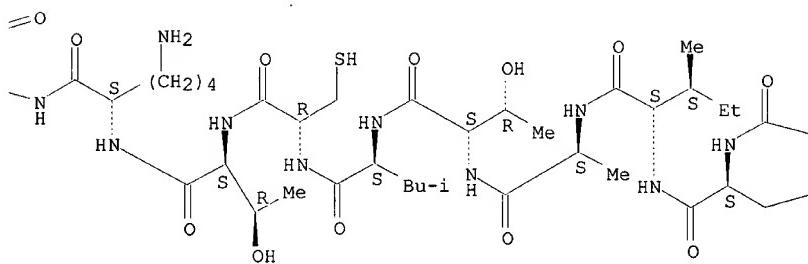
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Absolute stereochemistry.

PAGE 1-A



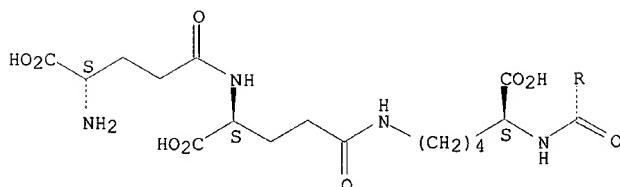
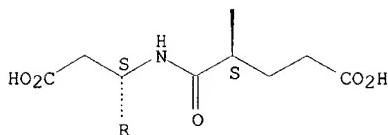
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PAGE 2-A

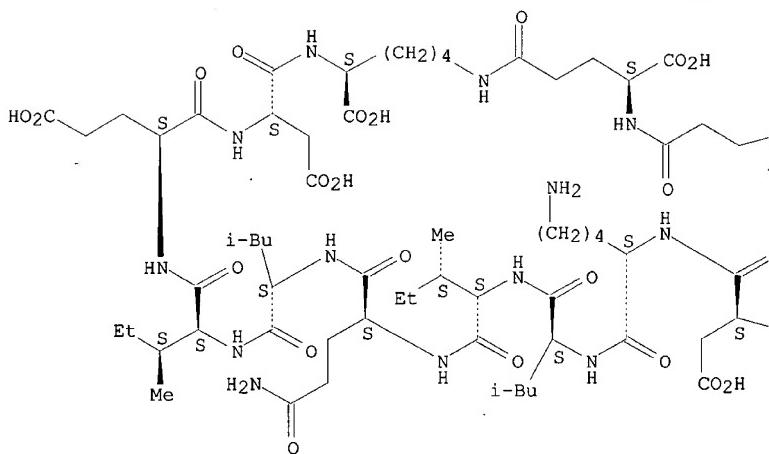


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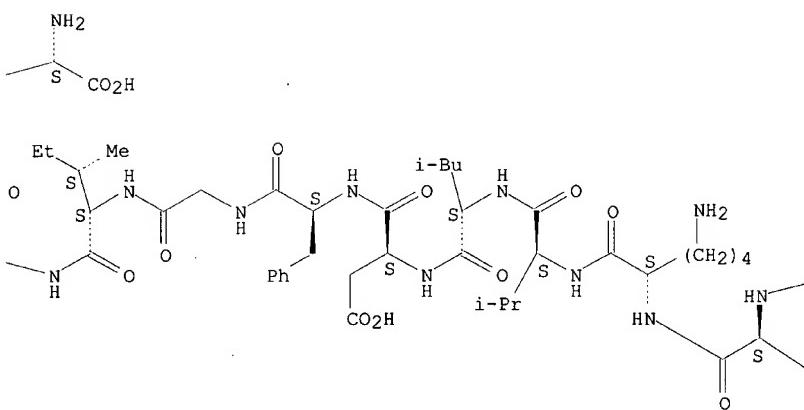
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Absolute stereochemistry.

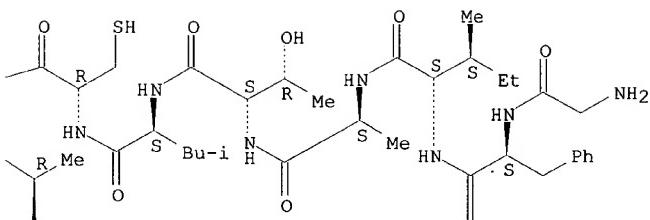
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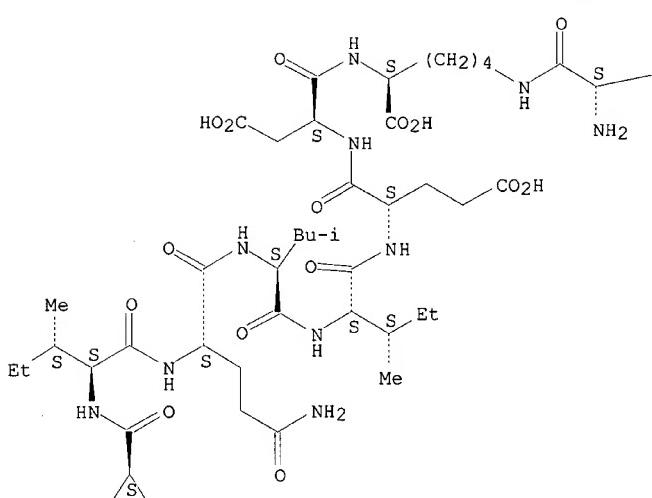


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Absolute stereochemistry.

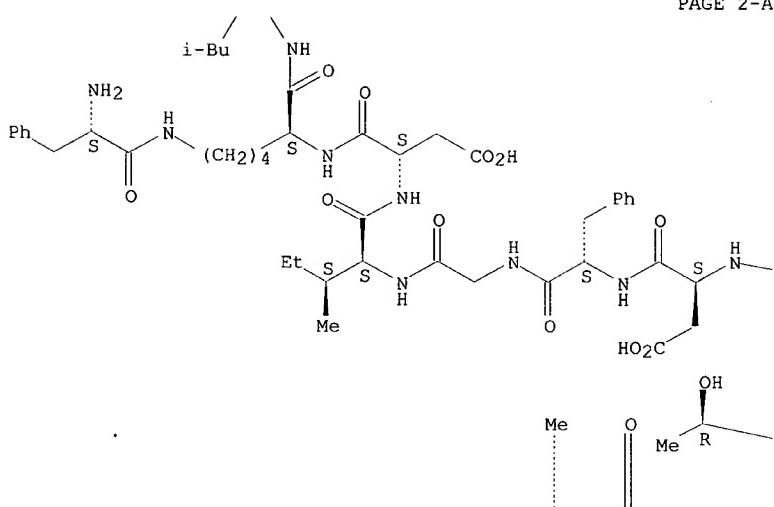
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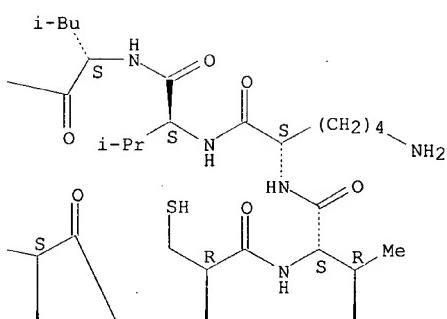
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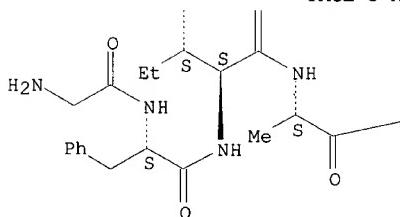
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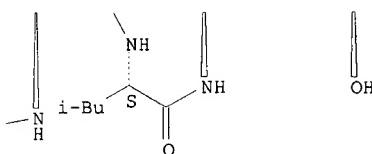
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PAGE 3-B

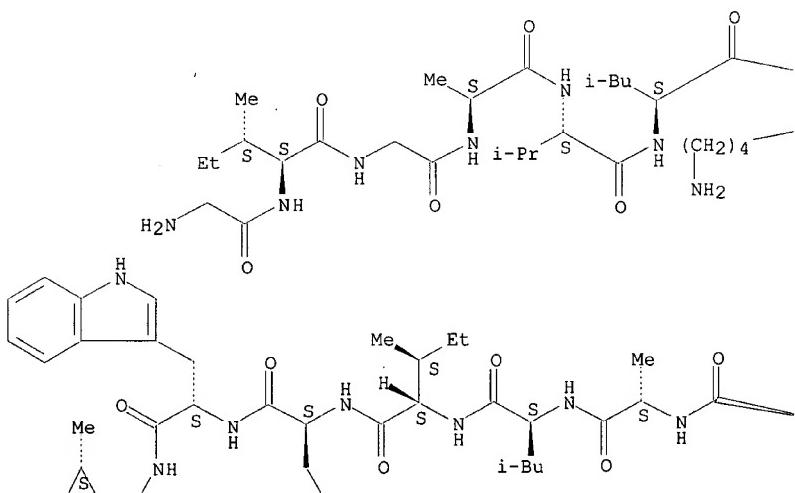


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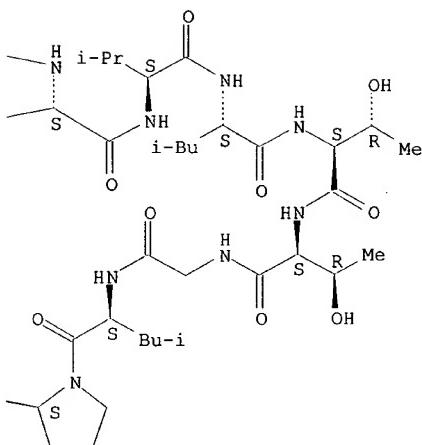
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Absolute stereochemistry.

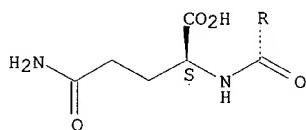
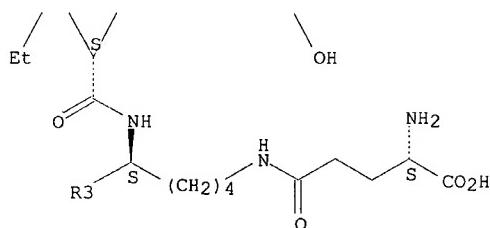
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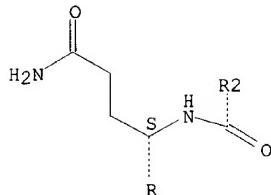
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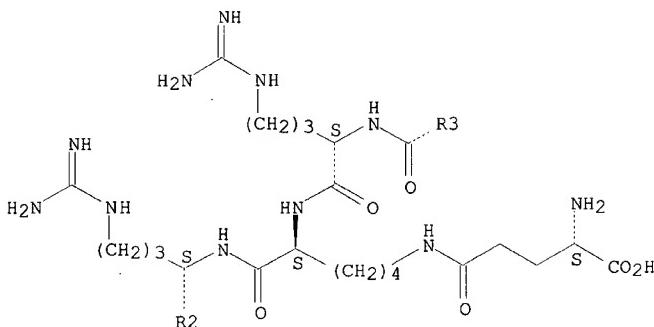
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PAGE 3-A



PAGE 4-A



113 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:833364 CAPLUS

ACCESSION NUMBER: 200175  
DOCUMENT NUMBER: 136:595

DOCUMENT NUMBER: 100-336  
TITLE: Antitumor pore-forming procytotoxic peptides

**INVENTOR(S):** YU-CHI HAN; WAGNER, THOMAS

INVENTOR(S): Tu, Xianxian; Wagner, Thomas  
PATENT ASSIGNEE(S): Greenville Hospital System, USA

PATENT ASSIGNEE(S): GREENVILLE HOSPITAL SYSTEM  
SOURCE: PCT Int. Appl. - 33 pp.

SOURCE: FCI Inc. App  
CODEN: PTXXD2

DOCUMENT TYPE: Patent

DOCUMENT TYPE: Patent  
LANGUAGE: English

LANGUAGE: E  
FAMILY ACC NUM COUNT: 3

**FAMILY ACC. NUM. COMB.  
PATENT INFORMATION:**

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001085777	A2	20011115	WO 2001-US40690	20010509
WO 2001085777	A3	20020307		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CU, CZ, DE, DK, EC, EE, ES, FI, GB, GE, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1282642	A2	20030212	EP 2001-933407	20010509
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IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 PRIORITY APPLN. INFO.: US 2000-203063P P 20000509  
                           US 2000-212042P P 20000616  
                           WO 2001-US40690 W 20010509

OTHER SOURCE(S): MARPAT 136:595

AB A class of procytotoxic agents is characterized by a capability to kill with target cell-specificity. Such an aspect can be a pore-forming protein which has at least one lysine residue, modified by a peptide linkage to an amino acid residue, via the epsilon amino group. These agents are useful in treating cancer, esp. prostate cancer.

IT 374107-25-2 374107-26-3 374107-27-4

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

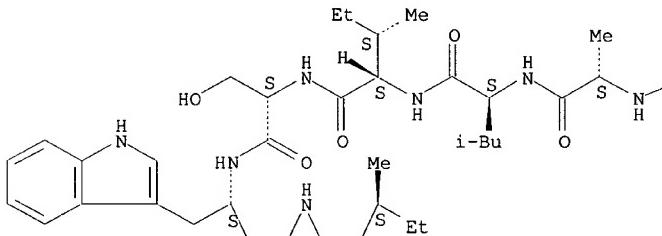
(antitumor pore-forming procytotoxic peptides)

RN 374107-25-2 CAPIUS

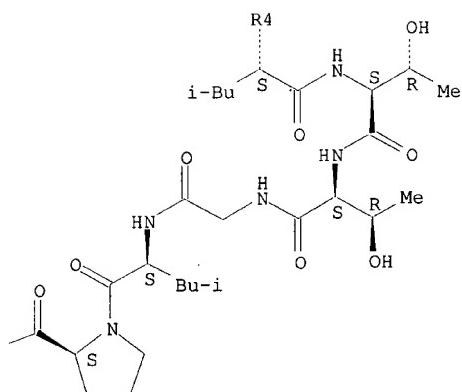
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Absolute stereochemistry.

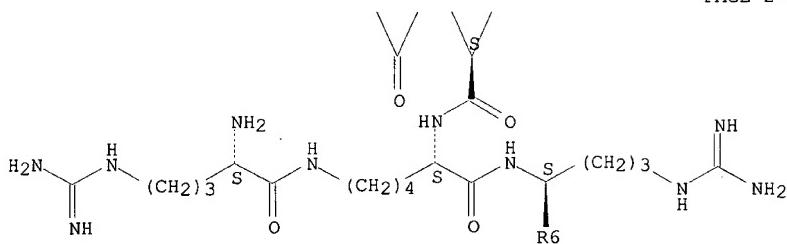
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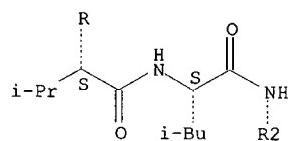
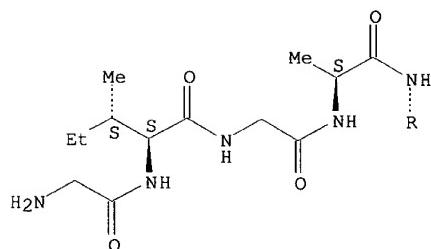
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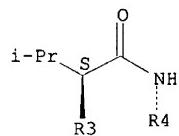
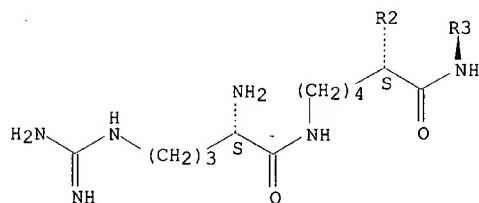
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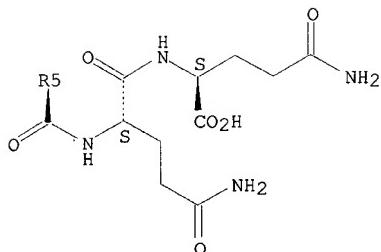
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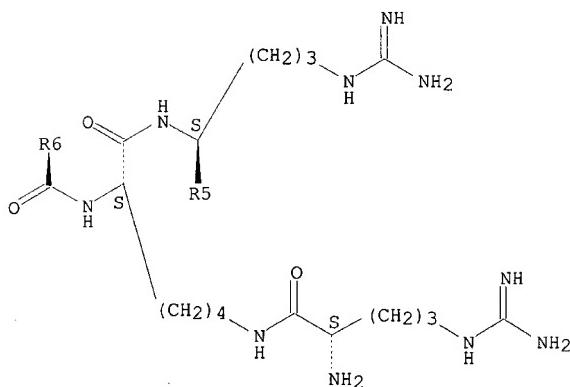
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PAGE 5-A



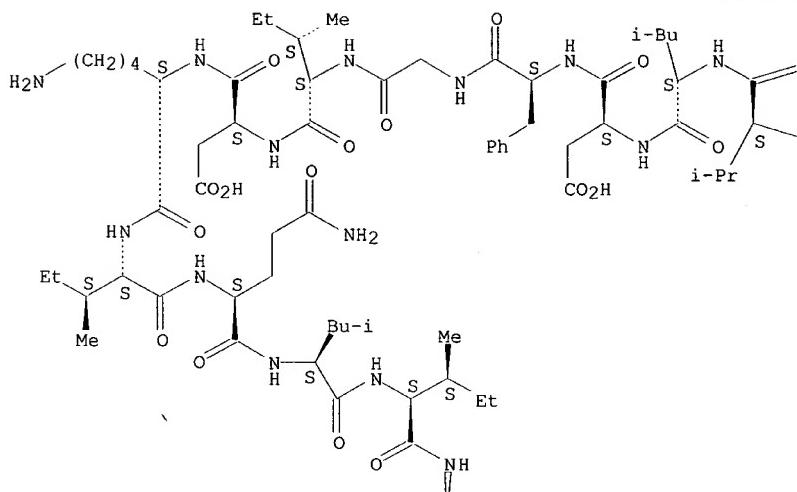
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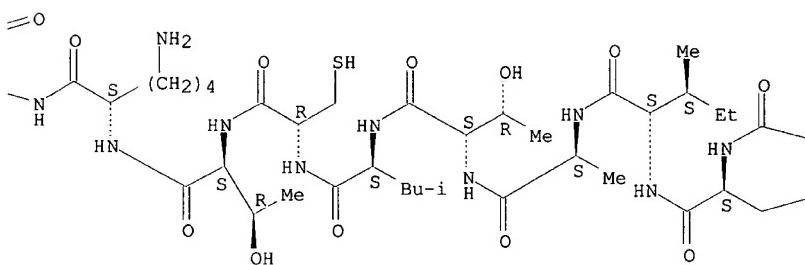
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Absolute stereochemistry.

PAGE 1-A



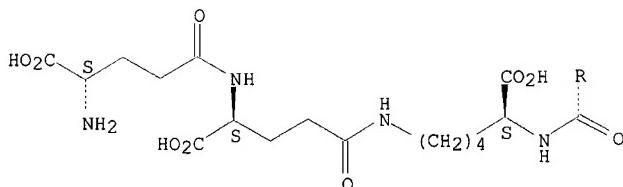
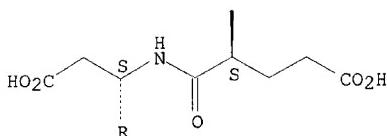
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PAGE 1-C



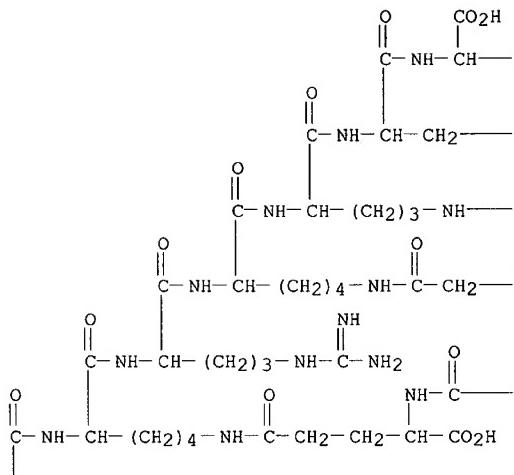
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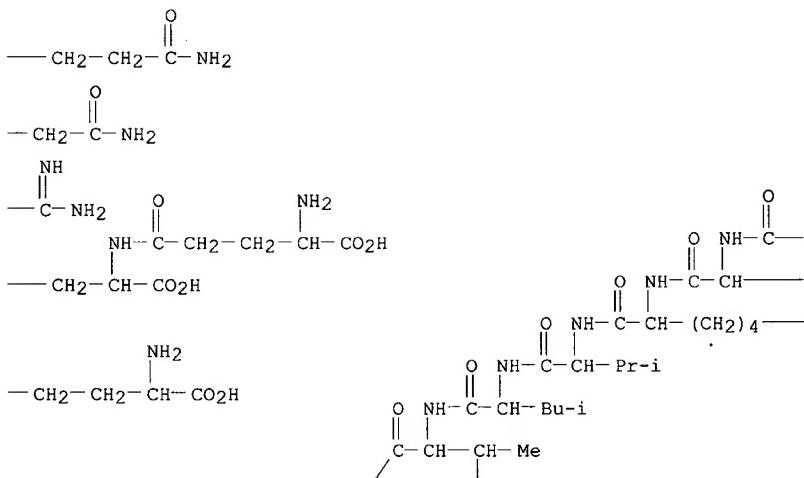
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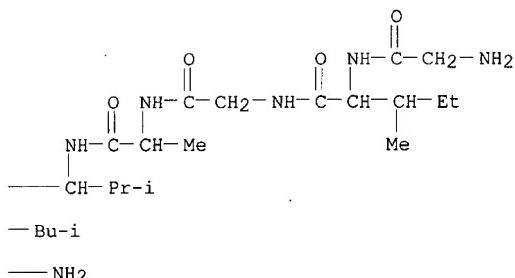
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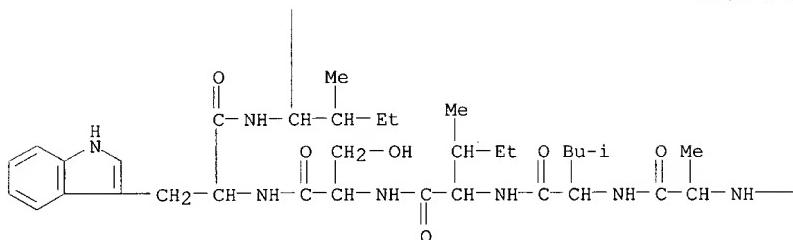
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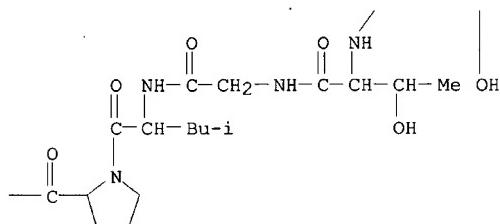
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IT 374107-13-8 374107-15-0 374107-16-1  
 374107-17-2 374107-18-3 374107-19-4  
 374107-20-7 374107-21-8 374107-22-9  
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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (antitumor pore-forming procytotoxic peptides)

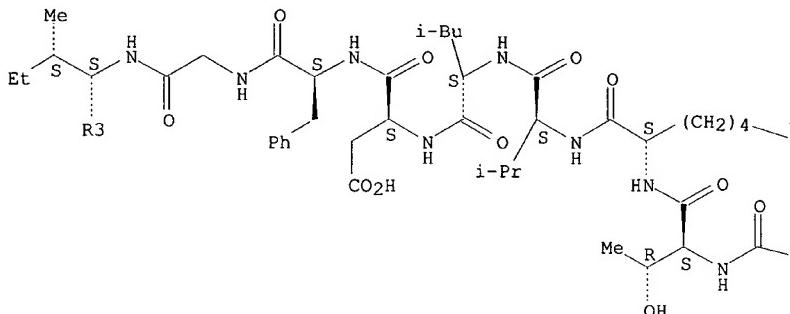
RN 374107-13-8 CAPLUS

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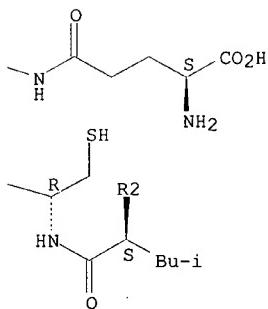
.gamma.-glutamyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-.gamma.-glutamyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

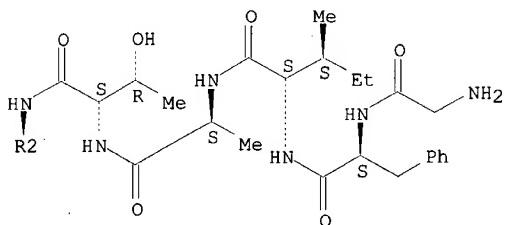
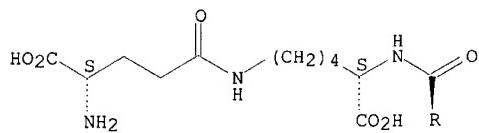
PAGE 1-A



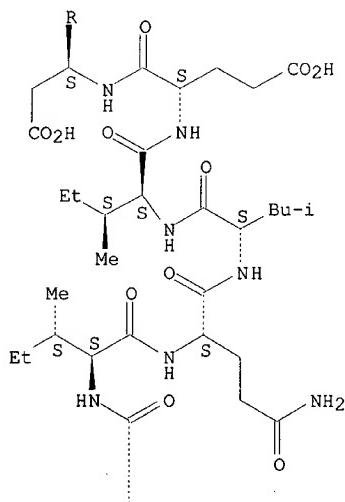
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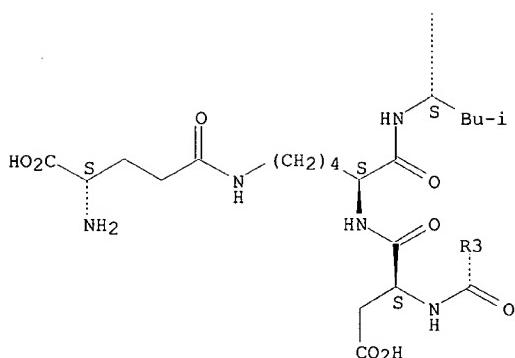
PAGE 2-A



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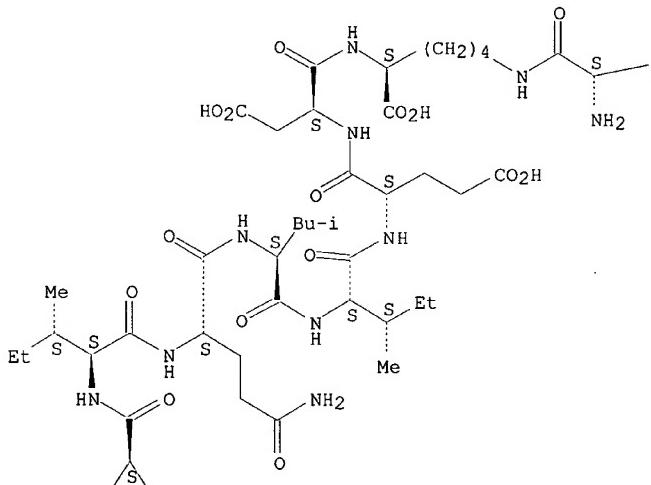


RN 374107-15-0 CAPLUS

CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-phenylalanyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-phenylalanyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-phenylalanyl- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

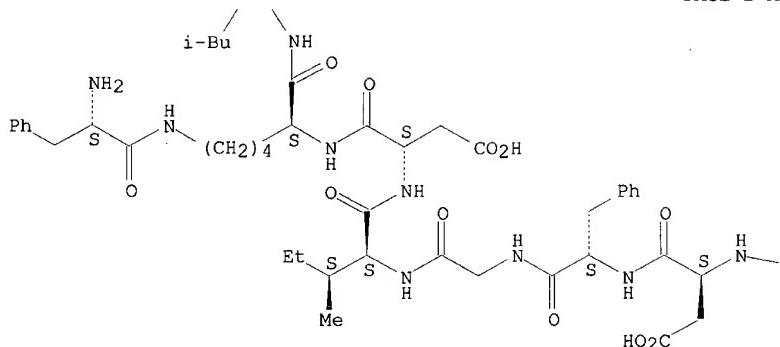
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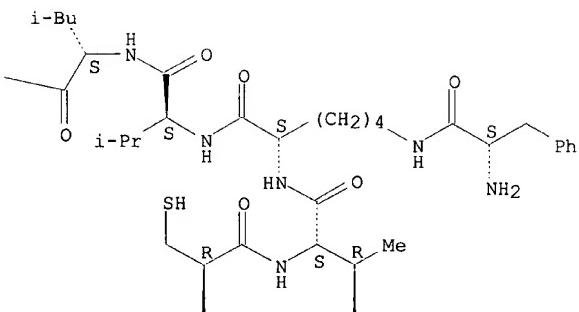
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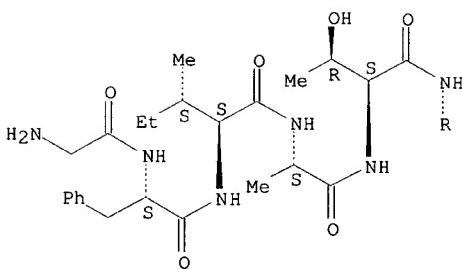
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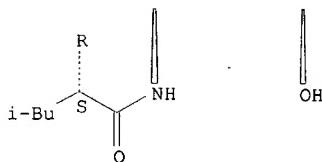
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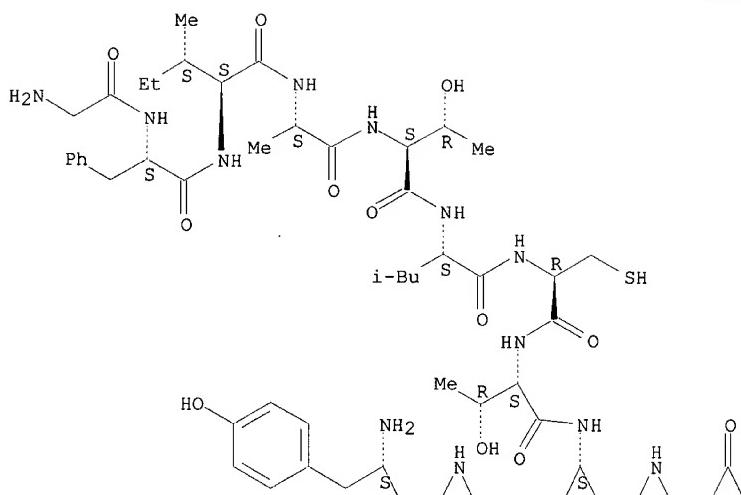


RN 374107-16-1 CAPLUS

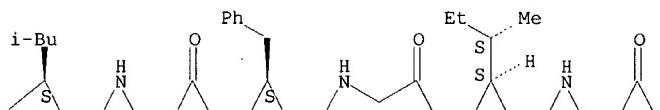
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Absolute stereochemistry.

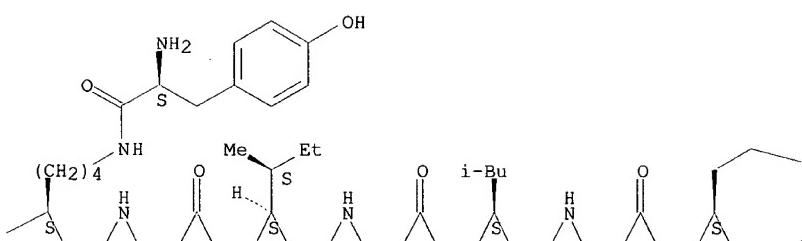
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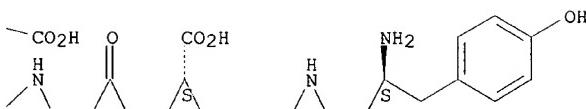
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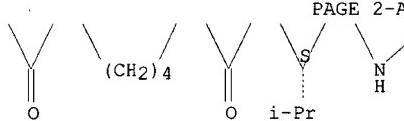
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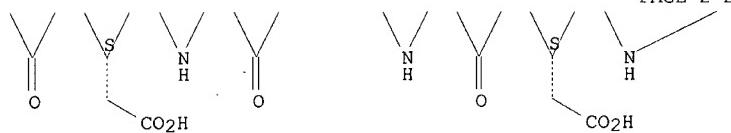
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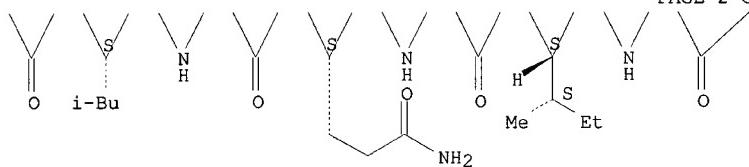
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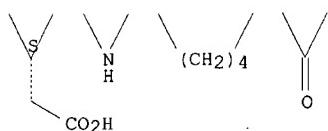
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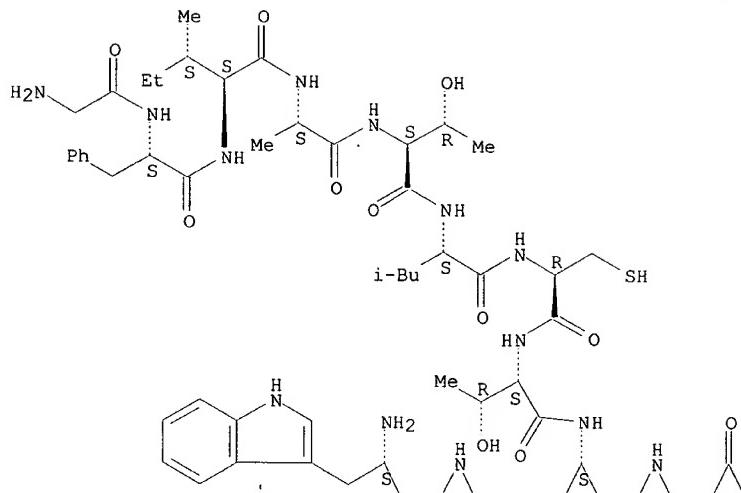
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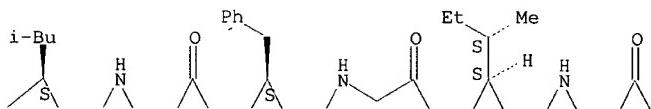
RN 374107-17-2 CAPLUS  
 CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-tryptophyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-tryptophyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

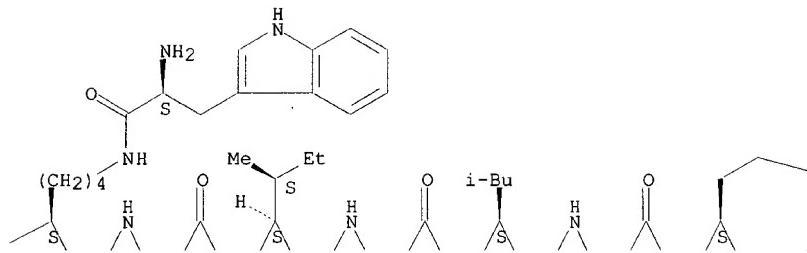
PAGE 1-A



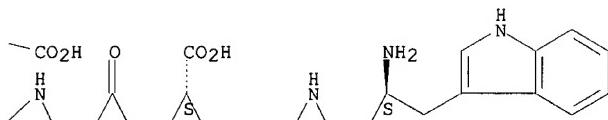
PAGE 1-B



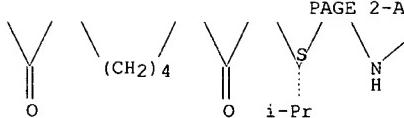
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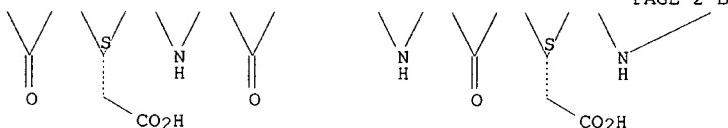
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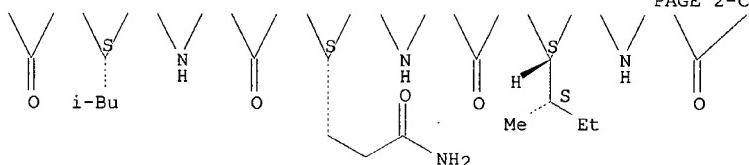
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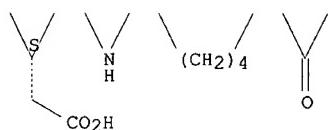
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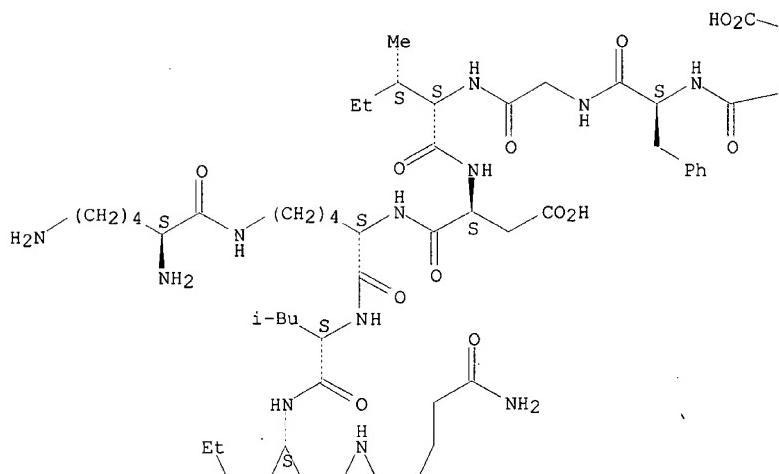
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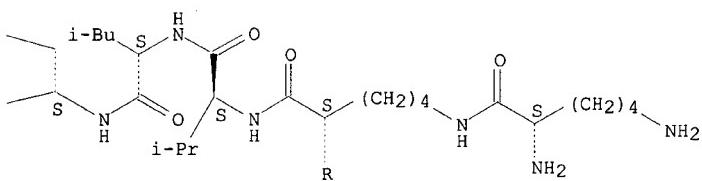
RN 374107-18-3 CAPLUS  
 CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-lysyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-lysyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

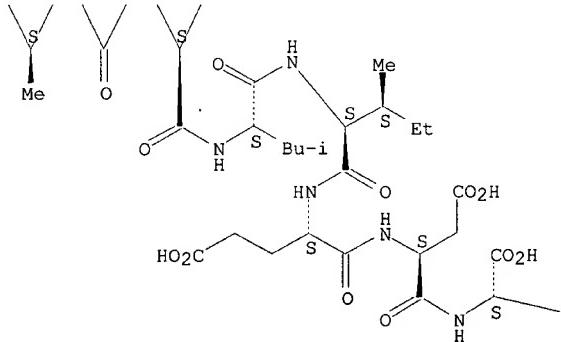
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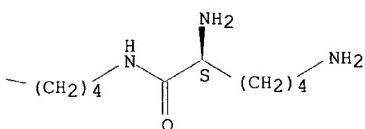
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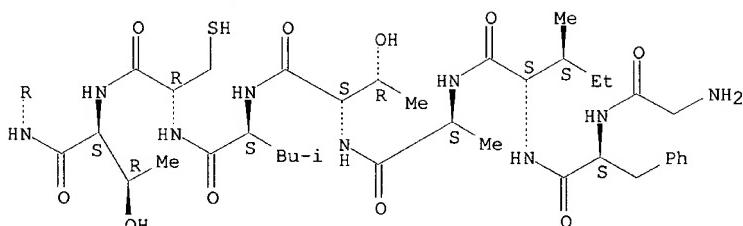
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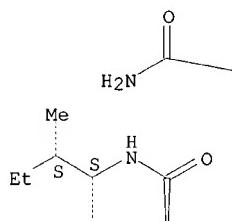
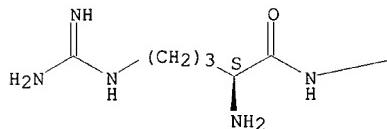


RN 374107-19-4 CAPLUS

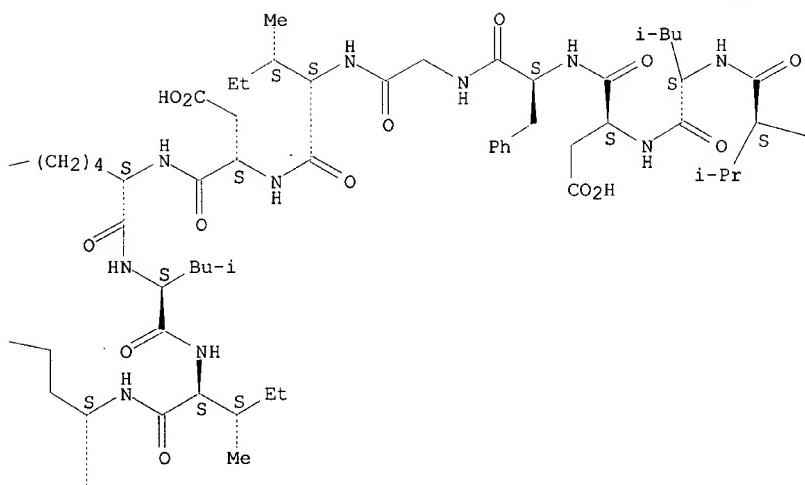
CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-arginyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-arginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

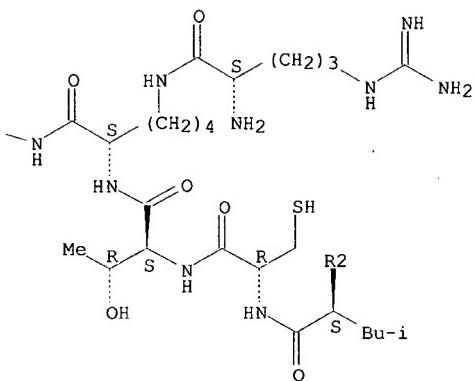
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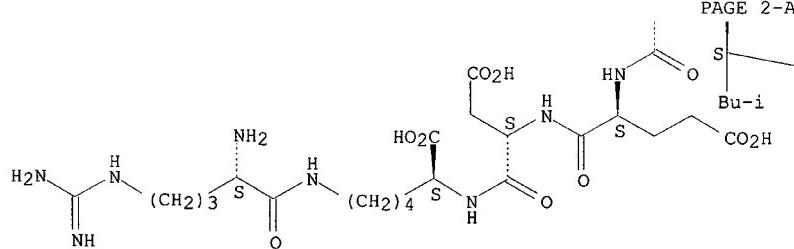
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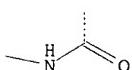
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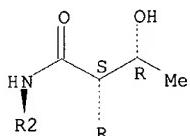
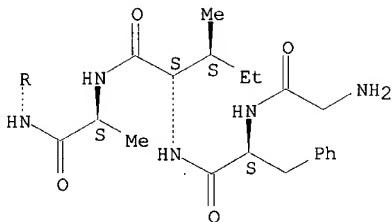
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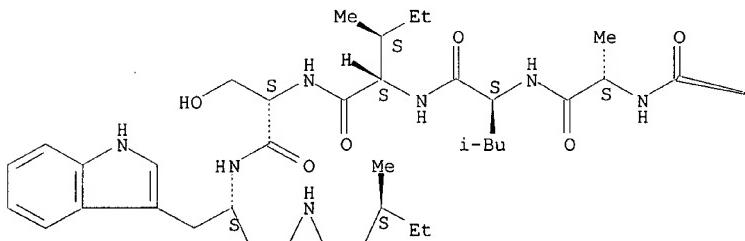
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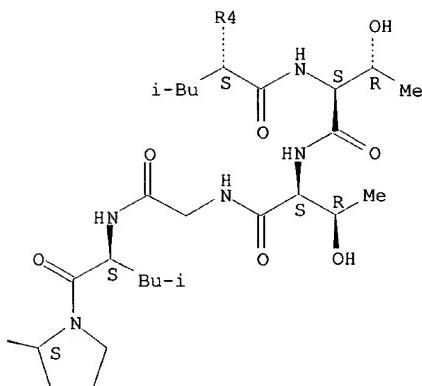
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Absolute stereochemistry.

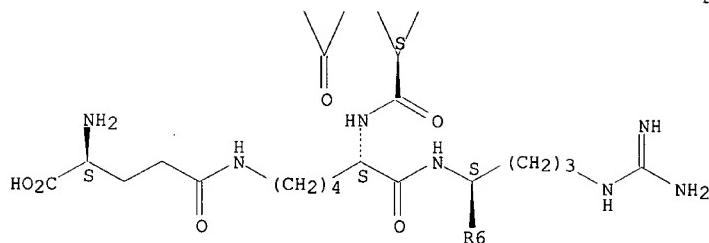
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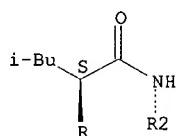
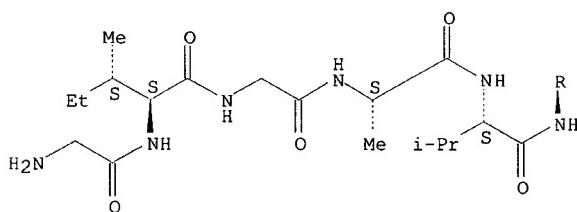
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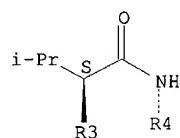
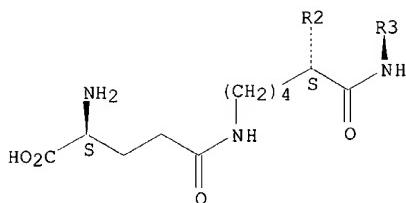
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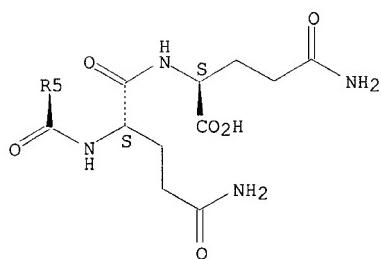
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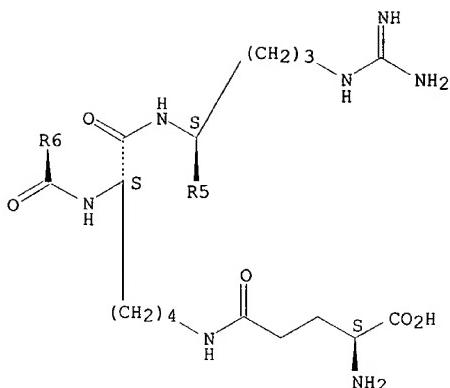
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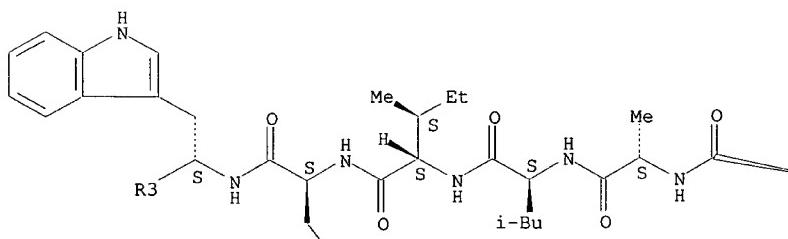


RN 374107-21-8 CAPLUS

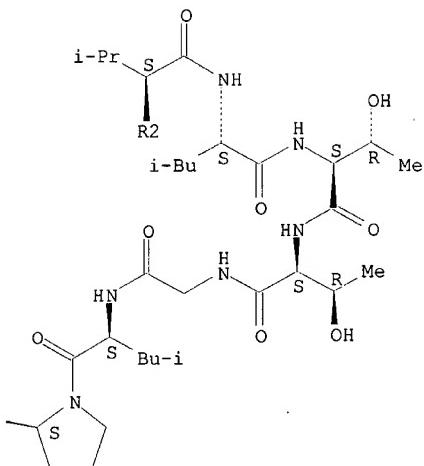
CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-phenylalanyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-proyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-phenylalanyl-L-lysyl-L-arginyl-N6-L-phenylalanyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

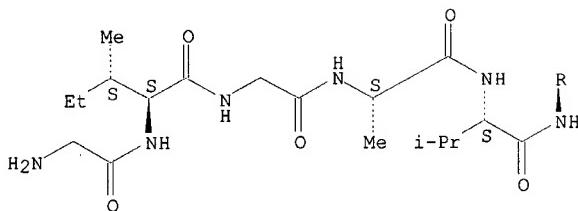
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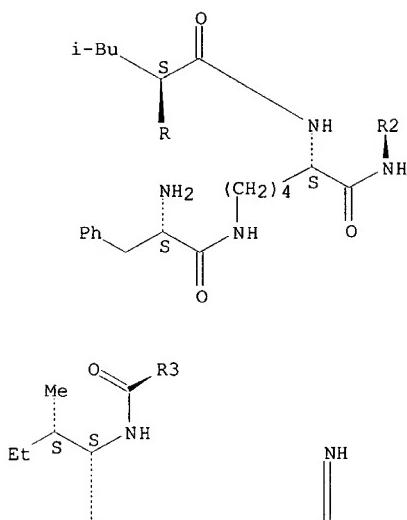
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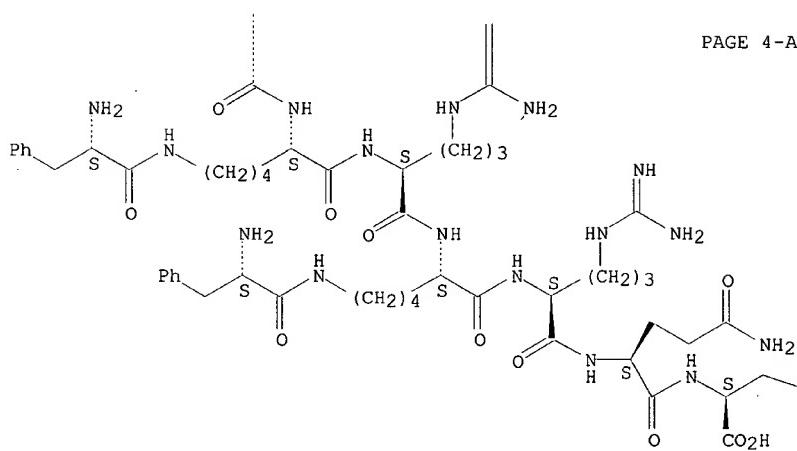
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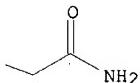
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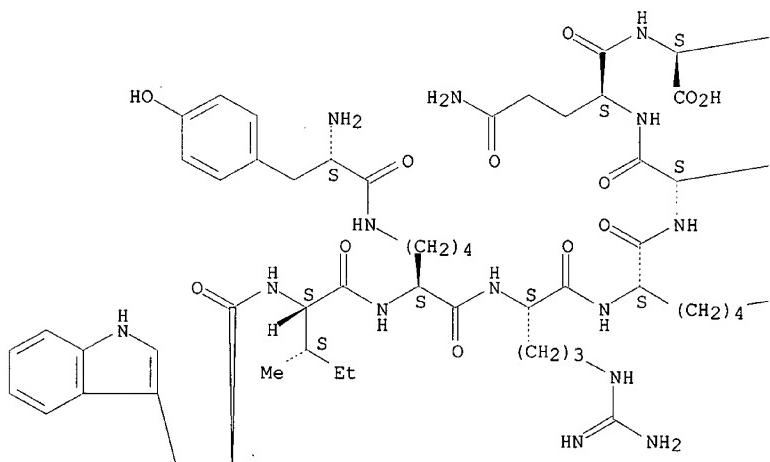
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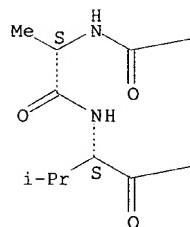
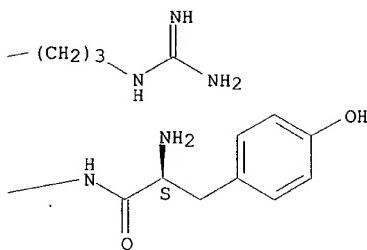
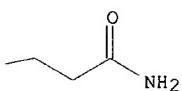
RN 374107-22-9 CAPLUS  
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Absolute stereochemistry.

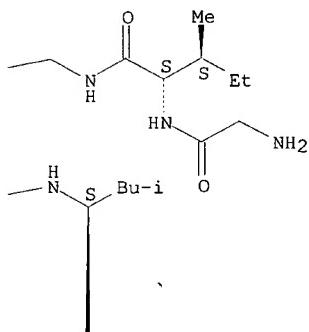
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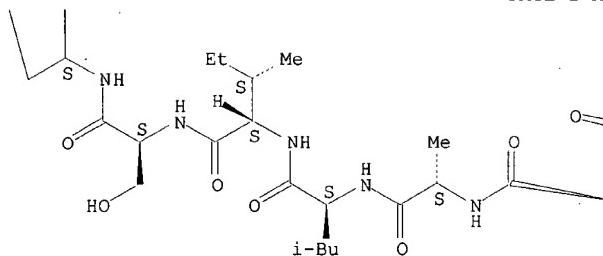
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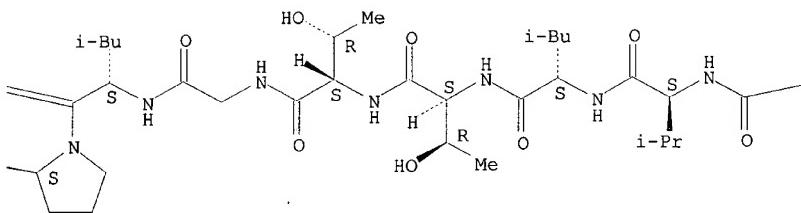
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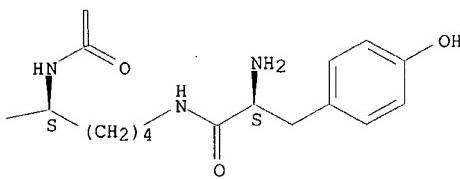
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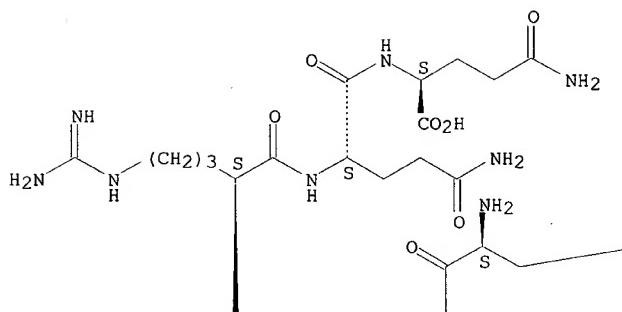
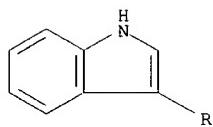


RN 374107-23-0 CAPIUS

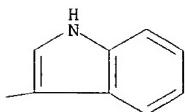
CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-tryptophyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-proyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-tryptophyl-L-lysyl-L-arginyl-N6-L-tryptophyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

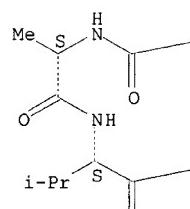
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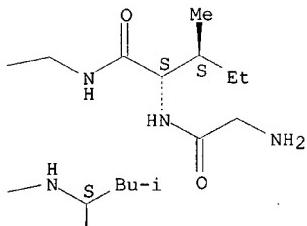
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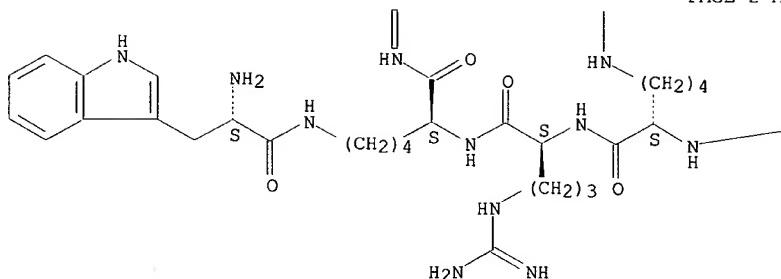
PAGE 1-C



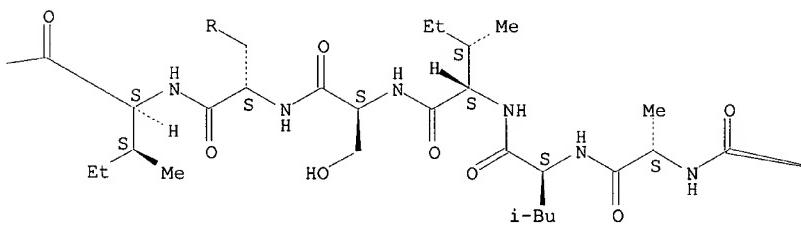
PAGE 1-D



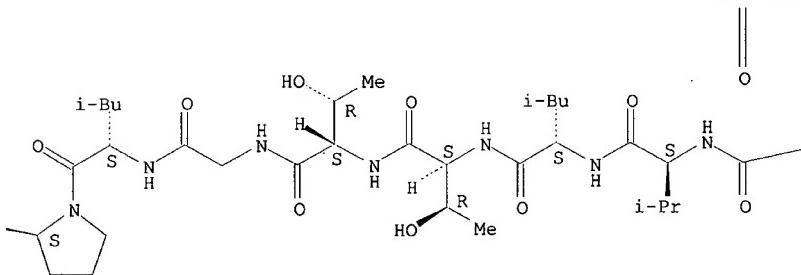
PAGE 2-A



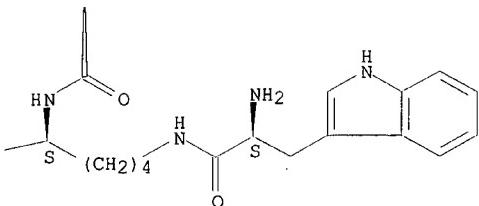
PAGE 2-B.



PAGE 2-C



PAGE 2-D

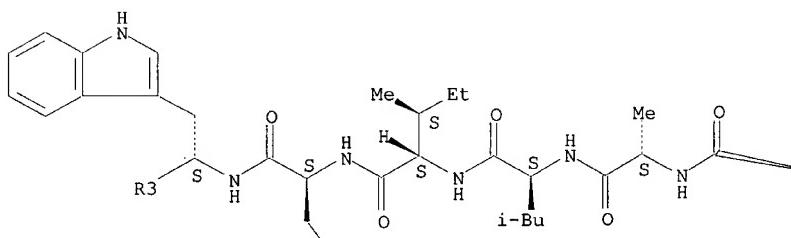


RN 374107-24-1 CAPLUS

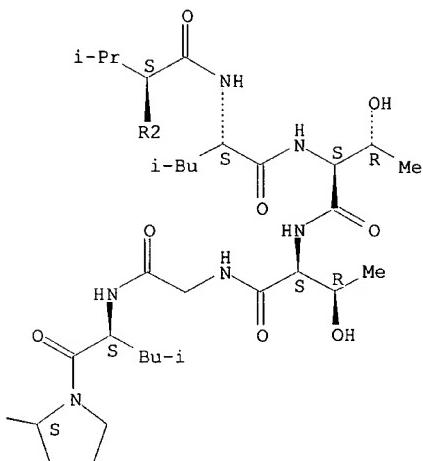
CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-lysyl-L-lysyl-L-arginyl-N6-L-lysyl-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

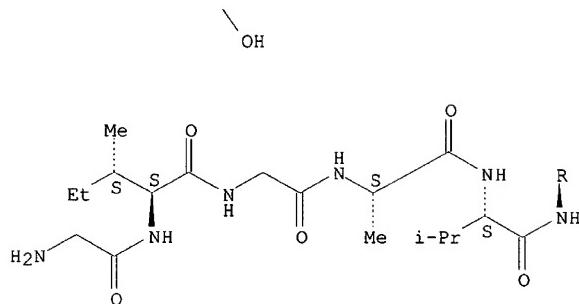
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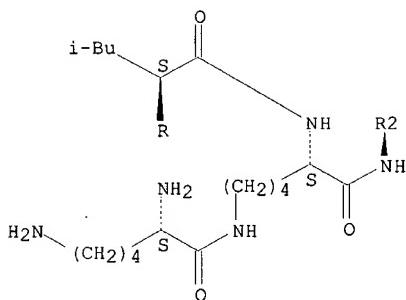
PAGE 1-B



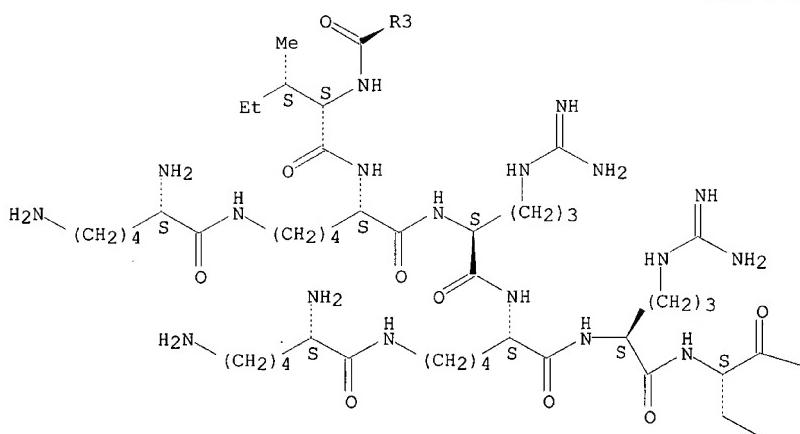
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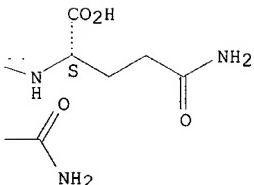
PAGE 3-A



PAGE 4-A



PAGE 4-B



L13 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:712128 CAPLUS

DOCUMENT NUMBER: 136:63713

TITLE: In vitro targeted killing of prostate tumor cells by a synthetic amoebapore helix 3 peptide modified with two .gamma.-linked glutamate residues at the COOH terminus

AUTHOR(S): Warren, Patrick; Li, Laiji; Song, Wendy; Holle, Eric; Wei, Yangzhang; Wagner, Thomas; Yu, Xianzhong

CORPORATE SOURCE: Greenville Hosp. System, Oncology Research Institute, Greenville, SC, 29605; USA

SOURCE: Cancer Research (2001), 61(18), 6783-6787

CODEN: CNREA8; ISSN: 0008-5472

PUBLISHER: American Association for Cancer Research

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Prostate-specific membrane antigen (PSMA) is a trans-membrane protein specifically expressed in LNCaP cells, malignant human prostate tissues, and the surrounding neovasculature. PSMA is a unique exopeptidase with reactivity toward poly-.gamma.-glutamated folates. It can sequentially remove the poly-.gamma.-glutamyl termini. To target prostate tumor cells, a novel procytolytic peptide was designed with a backbone consisting of an amoebapore H3 domain modified by two .gamma.-linked glutamate residues at the .epsilon.-amino group of the COOH-terminal lysine residue. The strategy behind the design of this prolytic peptide was to inactivate the lytic amoebapore H3 peptide by replacing its functionally important COOH-terminal pos. charge with neg. charged groups, which in turn might be selectively removed by the PSMA exopeptidase. This peptide exhibited little cytolytic activity toward PSMA-neg. cells, such as PC-3 cells. On the other hand, this peptide exhibited strong cytolytic activity toward PSMA-pos. LNCaP cells in a concn.-dependent manner. The carboxypeptidase inhibitor 4,4'-phosphonicobis(butane-1,3-dicarboxylic acid) can inhibit this activity. Moreover, this peptide also exhibited cytolytic activity toward PSMA cDNA-transfected PC-3 cells.

IT 384831-96-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

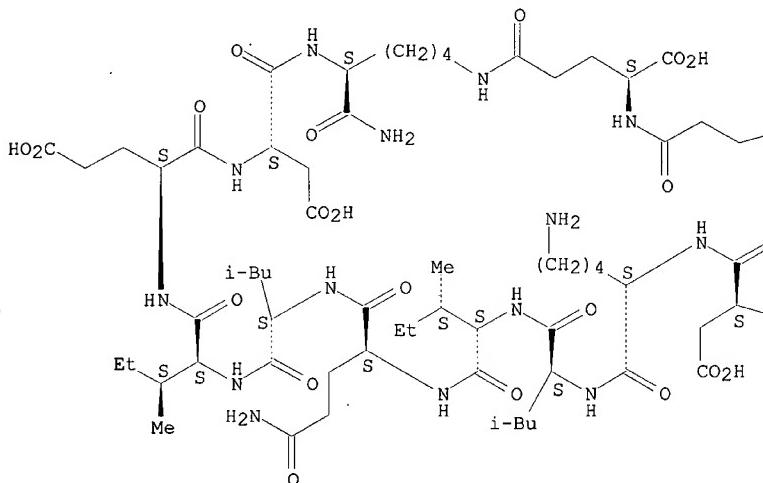
(in vitro targeted killing of prostate tumor cells by a synthetic amoebapore helix 3 peptide modified with two .gamma.-linked glutamate residues at COOH terminus)

RN 384831-96-3 CAPLUS

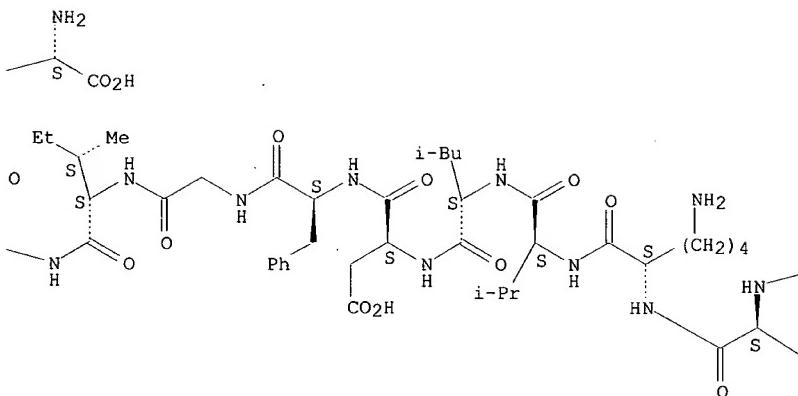
CN L-Lysinamide, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

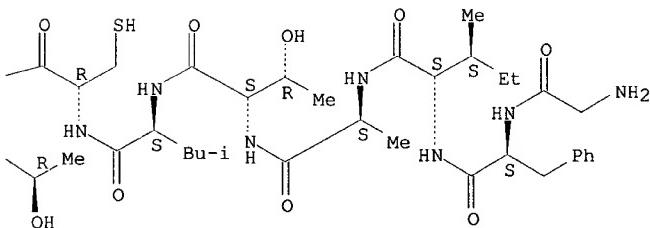
PAGE 1-A



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PAGE 1-C



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:733704 CAPLUS

DOCUMENT NUMBER: 130:77807

TITLE: Purification of a galanin degrading 70 kDa

Searched by Barb O'Bryen, STIC 308-4291

AUTHOR(S): Jureus, A.; Lindgren, M.; Langel, U.; Bartfai, T.  
 CORPORATE SOURCE: Department of Neurochemistry and Neurotoxicology,  
 Stockholm University, Stockholm, S-10691, Swed.  
 SOURCE: Neuropeptides (Edinburgh) (1998), 32(5), 453-460  
 CODEN: NRPPDD; ISSN: 0143-4179  
 PUBLISHER: Churchill Livingstone  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Galanin is a 29/30 amino acids long neuroendocrine peptide, acting as an inhibitory modulator in the spinal cord. Several studies show that galanin is involved in control of pain threshold and acts synergistically with morphine, hence, inhibition of galanin degrdn. may be a pharmaceutical target for treatment of pain. In this study we have designed an 11 amino acids long substrate based on the first 10 N-terminal amino acids of galanin (this part contains the major pharmacophores of galanin), with a N-terminal fluorescent marker, anthranilic acid, and a C-terminal internal fluorescence quencher, 3-nitrotyrosine, coupled to the epsilon.-amino group of the linker Lys11. Using this substrate to detect galanin degrdn., we have purified a membrane bound galanin inactivating metallo-peptidase from bovine spinal cord. This enzyme, cleaving galanin between Trp2 and Thr3, is a novel 70 kDa, Zn<sup>2+</sup> dependent metallo-peptidase.

IT 218787-41-8P

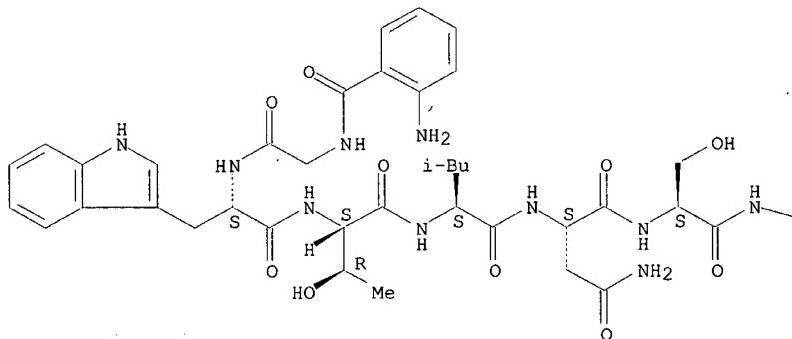
RL: ARG (Analytical reagent use); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
 (purifn. of a galanin-degrading metallo-peptidase from bovine spinal cord)

RN 218787-41-8 CAPLUS

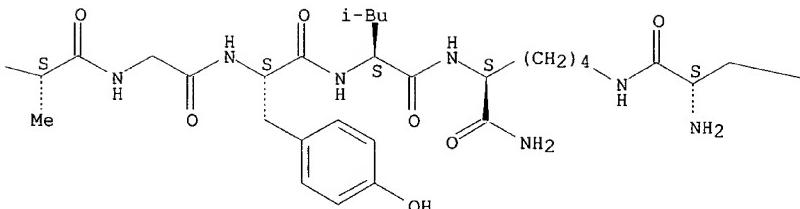
CN L-Lysinamide, N-(2-aminobenzoyl)glycyl-L-tryptophyl-L-threonyl-L-leucyl-L-asparaginyl-L-seryl-L-alanylglycyl-L-tyrosyl-L-leucyl-N6-(3-nitro-L-tyrosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

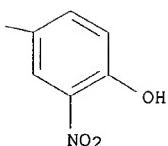
PAGE 1-A



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REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1997:270236 CAPLUS  
DOCUMENT NUMBER: 127:62253  
TITLE: The rational design of TAP inhibitors using peptide substrate modifications and peptidomimetics  
AUTHOR(S): Gromme, Monique; Van der Valk, Richard; Sliedregt, Karen; Vernie, Leen; Liskamp, Rob; Hammerling, Gunter; Koopmann, Jens Oliver; Momburg, Frank; Neefjes, Jacques  
CORPORATE SOURCE: Division Cellular Biochemistry, Netherlands Cancer Institute, Amsterdam, 1066 CX, Neth.  
SOURCE: European Journal of Immunology (1997), 27(4), 898-904  
CODEN: EJIMAF; ISSN: 0014-2980  
PUBLISHER: VCH  
DOCUMENT TYPE: Journal

**LANGUAGE:** English

AB Various alterations of the peptide substrate were studied to synthesize inhibitors for the major histocompatibility complex (MHC)-encoded transporter assocd. with antigen processing (TAP). It was concluded that TAP is stereospecific and that peptide bonds engineered into isosteric structures can improve translocation of the peptide. TAP is able to translocate peptides with large side chains that correspond to a peptide of 21 amino acids in extended conformation. Peptides with longer side chains compete for the peptide binding site of TAP but fail to be translocated. They represent the 1st rationally designed inhibitors of TAP.

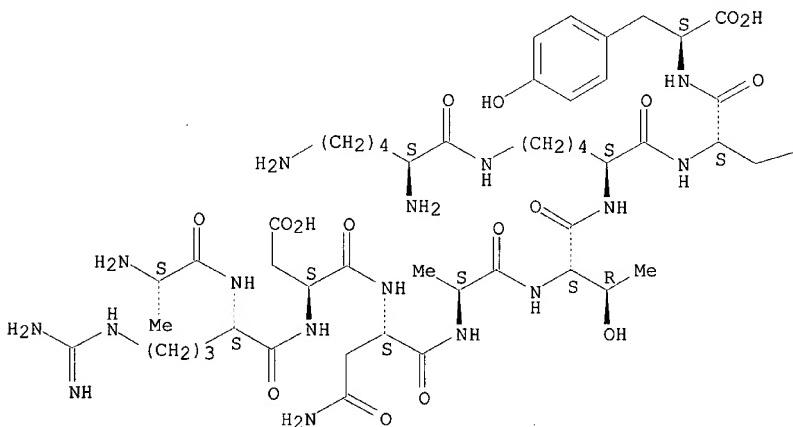
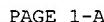
IT 191219-40-6P

RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process)  
(peptides for TAP inhibitors design, stereoisomers and amino acid sequences)

RN 191219-40-6 CAPLUS

CN L-Tyrosine, L-alanyl-L-arginyl-L-.alpha.-aspartyl-L-asparaginyl-L-alanyl-L-threonyl-N6-L-lysyl-L-lysyl-L-.alpha.-aspartyl- (9CI) (CA INDEX NAME)

## Absolute stereochemistry.



PAGE 1-B

$$-\text{CO}_2\text{H}$$

L13 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 1993:34184 CAPLUS  
DOCUMENT NUMBER: 118:34184  
TITLE: Conformational and aggregational states of  
.omega.-aminoacylmelittin derivatives  
AUTHOR(S): Ramalingam, Kalaiyarasi; Bello, Jake  
CORPORATE SOURCE: Dep. Chem., State Univ. New York, Buffalo, NY, 14263,  
USA  
SOURCE: Biochemistry (1993), 32(1), 253-9  
CODEN: BICHAW; ISSN: 0006-2960  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The authors detd. the effect of displacing the pos. charges of the amino groups of N-terminal glycine and lysine residues away from the backbone of melittin in coil-to-helix transitions by using .omega.-aminoacyl derivs. of melittin. These were prep'd. by acylating the amino groups of melittin with .omega.-amino acids to yield the melittin derivs. glycylmelittin (MLT-2), (4-aminobutanoyl)melittin (MLT-4), and (5-aminopentanoyl)melittin (MLT-5), resp. At pH 7.2, there is a chain-length-dependent increase in helicity from MLT to MLT-5. The .omega.-aminoacylmelittin derivs. also show a concn.-dependent increase in helicity at pH 7.2. However, at pH 2.3, a concn.-independent, but chain length-dependent increase in helicity was obsd. A hydrophilic deriv. glycyglycylmelittin (MLT-GG) and a hydrophobic deriv. MLT-5, which have side chains of equal length, show similar helicity, at pH 7.2, but at pH 2.3 MLT-GG shows almost no helicity, while MLT-5 is about 60% helical. The lysyl deriv. (MLT-K), which has addnl. pos. charges compared to melittin, behaves much like MLT-2. At pH 7.2, all the derivs. exhibit both cold- and heat-induced denaturation; a significant amt. of residual structure is retained in the temp. range 80-100.degree.. These results are discussed in terms of the electrostatic and hydrophobic interactions involving the side chains.

IT 145204-13-3P

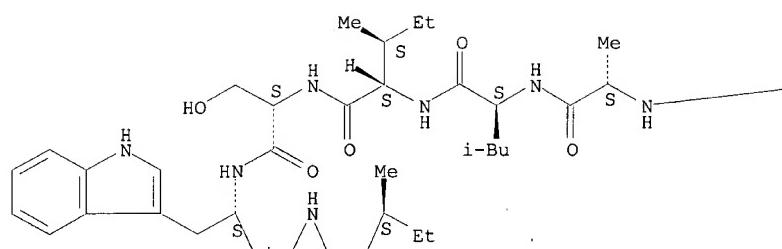
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and aggregation and conformation of, structure in relation to)

RN 145204-13-3 CAPLUS

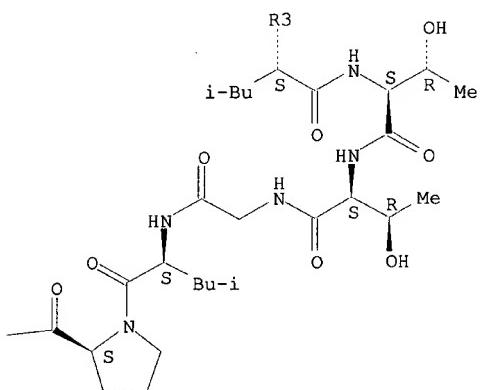
CN Melittin (honeybee), N-L-lysyl-7-(N6-L-lysyl-L-lysine)-21-(N6-L-lysyl-L-lysine)-23-(N6-L-lysyl-L-lysine)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

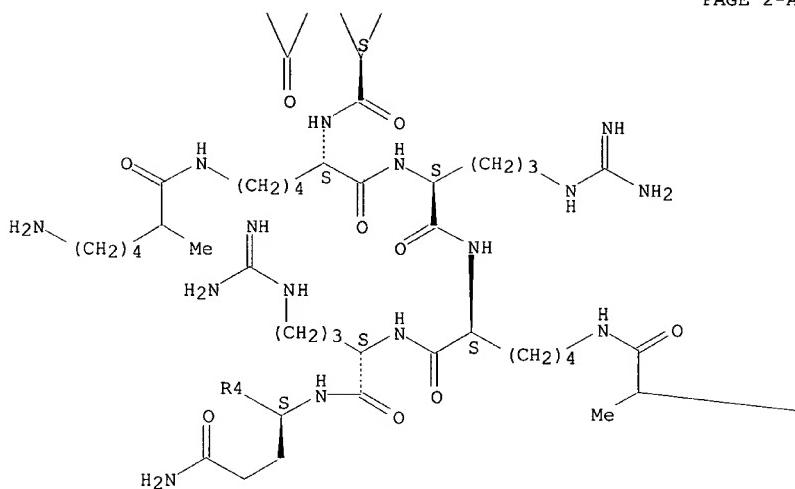
PAGE 1-A



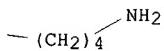
PAGE 1-B



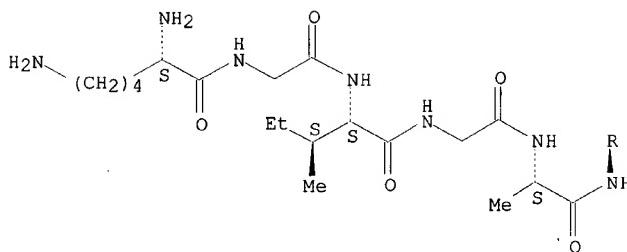
PAGE 2-A.



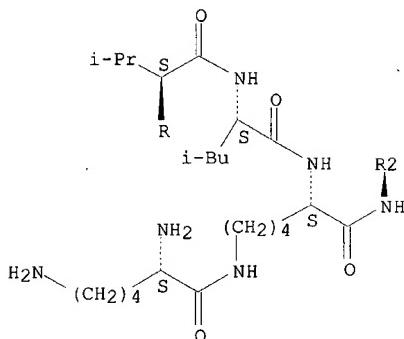
PAGE 2-B



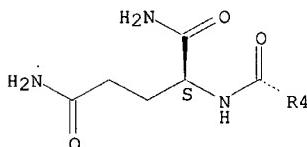
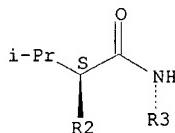
PAGE 3-A



PAGE 4-A



PAGE 5-A



L13 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1994:107692 CAPLUS  
 DOCUMENT NUMBER: 120:107692

TITLE: Peptide-encoding for structure determination of nonsequenceable polymers within libraries synthesized and tested on solid-phase supports

AUTHOR(S): Nikolaiev, V.; Stierandova, A.; Krchnak, V.; Seligmann, B.; Lam, K. S.; Salmon, S. E.; Lebl, M.

CORPORATE SOURCE: Selectide Corp., Tucson, AZ, 85737, USA

SOURCE: Peptide Research (1993), 6(3), 161-70

CODEN: PEREEO; ISSN: 1040-5704

DOCUMENT TYPE: Journal  
LANGUAGE: English

AB A method of indirectly detg. the structure of nonpeptide or nonsequenceable compds. that have been synthesized on individual particles of solid support is described. The technique permits the parallel synthesis of a compd. that is not susceptible to Edman degrdn. (e.g., N-terminal-blocked peptide), or one contg. components that cannot be identified by amino acid sequencing, together with a corresponding "coding" peptide. Each coupling step in the assembly of the nonsequenceable compd. is followed by the coupling of an amino acid to a different attachment site of the same carrier particle, whereby the amino acid unambiguously codes for the previously coupled building block of the nonsequenceable compd. The rationale is to enable the sequence detn. of a biol. active compd. that has been identified through the screening of a library of nonsequenceable compds., by translating the sequence of its "coding" peptide, detd. by Edman degrdn., into the structure of the active compd. The technique facilitates the construction and screening of nonpeptide libraries for the discovery of important pharmaceutical compds.

IT 152768-59-7P 152768-60-0P 152768-61-1P

152768-62-2P 152768-63-3P 152768-64-4P

152768-65-5P 152768-66-6P 152768-67-7P

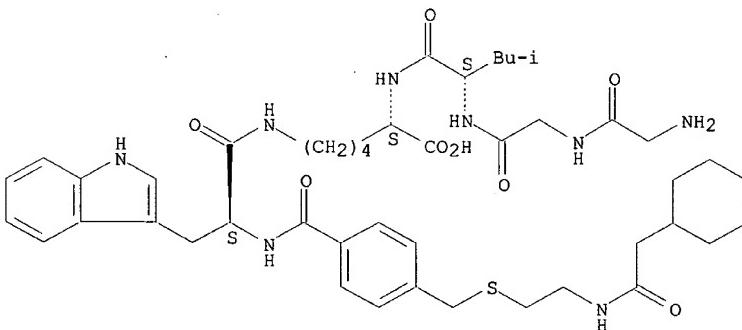
RL: SPN (Synthetic preparation); PREP (Preparation)

(prep. of, by solid-phase methods, amino acid coding scheme for)

RN 152768-59-7 CAPIUS

CN L-Lysine, N6-[N-[4-[[[2-[(cyclohexylacetyl)amino]ethyl]thio]methyl]benzoyl]-L-tryptophyl]-N2-[N-(N-glycylglycyl)-L-leucyl]- (9CI) (CA INDEX NAME)

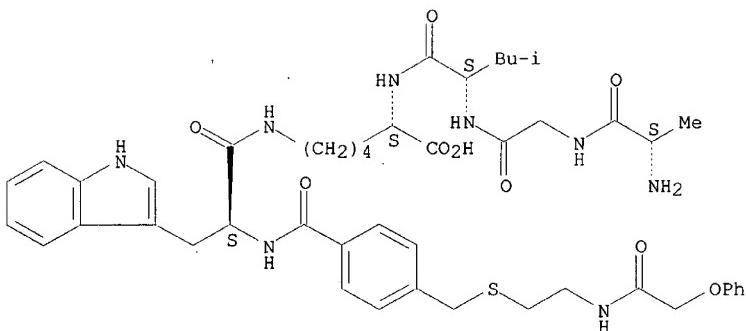
Absolute stereochemistry.



RN 152768-60-0 CAPIUS

CN L-Lysine, N2-[N-(N-L-alanylglycyl)-L-leucyl]-N6-[N-[4-[[[2-[(phenoxyacetyl)amino]ethyl]thio]methyl]benzoyl]-L-tryptophyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

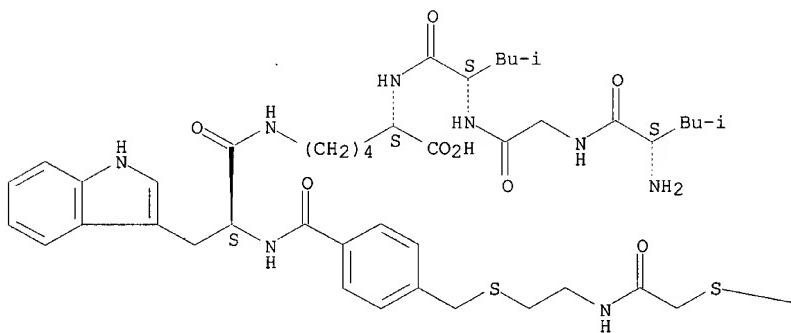


RN 152768-61-1 CAPLUS

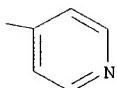
CN L-Lysine, N2-[N-(N-L-leucylglycyl)-L-leucyl]-N6-[N-{4-[[2-[[[4-pyridinylthio]acetyl]amino]ethyl]methyl]benzoyl}-L-tryptophyl]- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



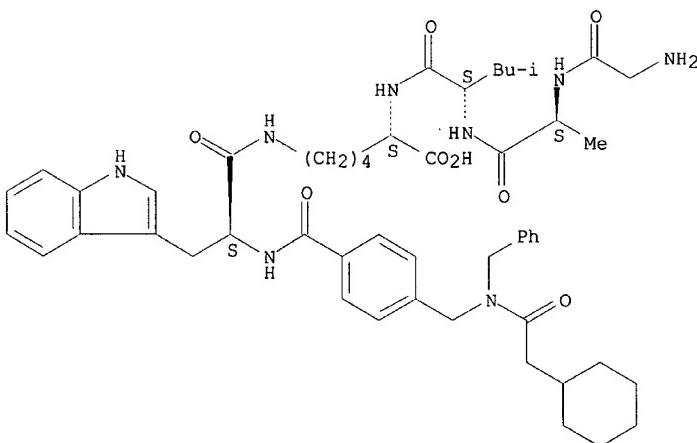
PAGE 1-B



RN 152768-62-2 CAPLUS

CN L-Lysine, N6-[N-[4-[(cyclohexylacetyl)(phenylmethyl)amino]methyl]benzoyl]-L-tryptophyl-N2-[N-(N-glycyl-L-alanyl)-L-leucyl]- (9CI) (CA INDEX NAME)

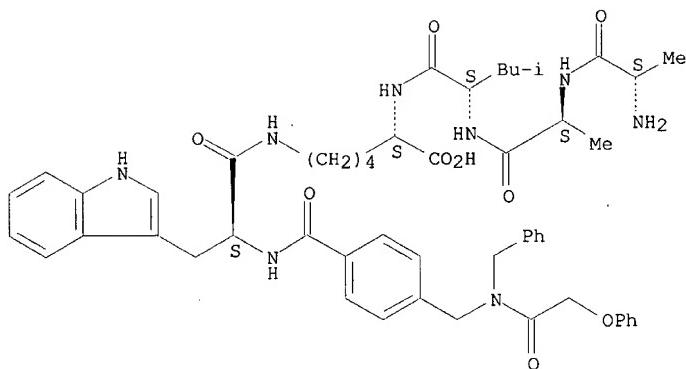
Absolute stereochemistry.



RN 152768-63-3 CAPLUS

CN L-Lysine, N2-[N-(N-L-alanyl-L-alanyl)-L-leucyl]-N6-[N-[4-[(phenoxyacetyl)(phenylmethyl)amino]methyl]benzoyl]-L-tryptophyl- (9CI) (CA INDEX NAME)

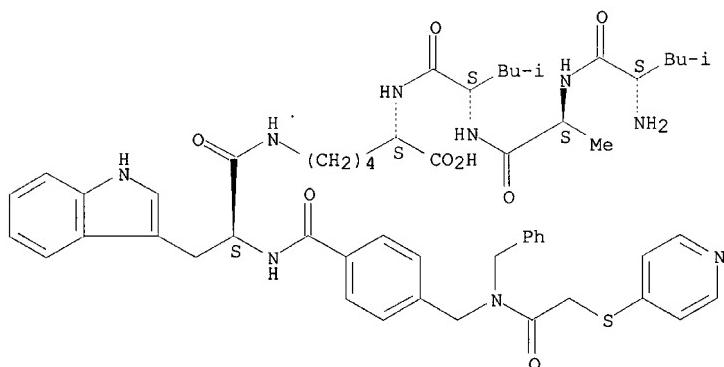
Absolute stereochemistry.



RN 152768-64-4 CAPLUS

CN L-Lysine, N2-[N-(N-L-leucyl-L-alanyl)-L-leucyl]-N6-[N-[4-[(phenylimethyl)(4-pyridinylthio)acetyl]amino]methyl]benzoyl]-L-tryptophyl] - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

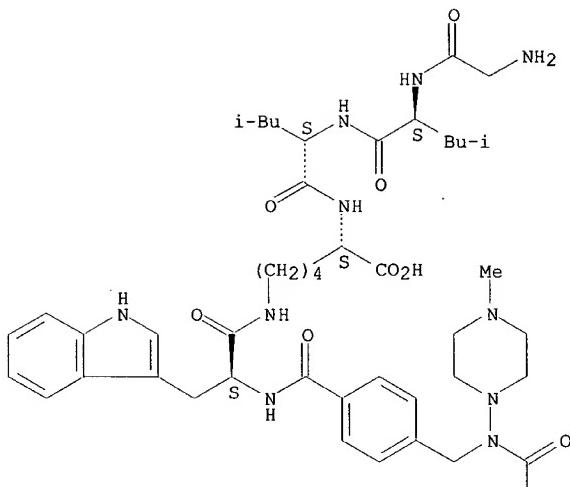


RN 152768-65-5 CAPLUS

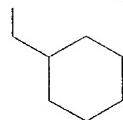
CN L-Lysine, N6-[4-[(cyclohexylacetyl)(4-methyl-1-piperazinyl)amino]methyl]benzoyl]-L-tryptophyl]-N2-[N-(N-glycyl-L-leucyl)-L-leucyl] - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



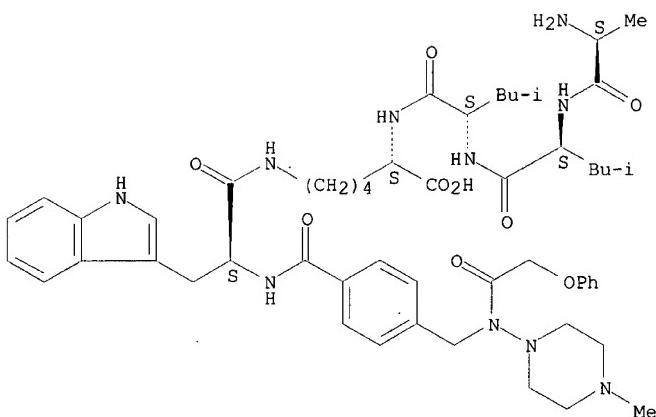
PAGE 2-A



RN 152768-66-6 CAPLUS

CN L-Lysine, N2-[N-(N-L-alanyl-L-leucyl)-L-leucyl]-N6-[N-[4-[(4-methyl-1-piperazinyl)(phenoxyacetyl)amino]methyl]benzoyl]-L-tryptophyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

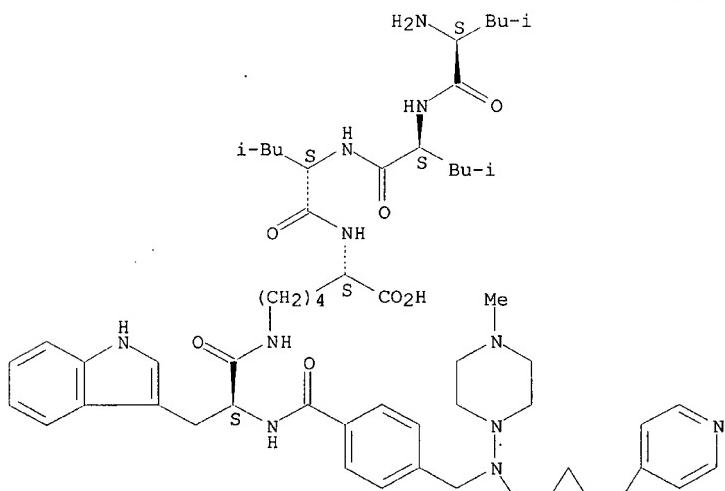


RN 152768-67-7 CAPLUS

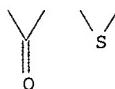
CN L-Lysine, N2-[N-(N-L-leucyl-L-leucyl)-L-leucyl]-N6-[N-[4-[(4-methyl-1-piperazinyl)[(4-pyridinylthio)acetyl]amino]methyl]benzoyl]-L-tryptophyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



L13 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1974:536493 CAPLUS

DOCUMENT NUMBER: 81:136493

TITLE: Compounds related to colistin. 6. Synthesis and  
antibacterial activity of acylpentapeptides. 1

AUTHOR(S): Kurihara, Tozaburo; Takeda, Hideo; Ito, Hideo

CORPORATE SOURCE: Tohoku Coll. Pharm., Sendai, Japan

SOURCE: Yakugaku Zasshi (1974), 94(8), 1004-9

CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Twelve RCO-Lys-Thr-Lys(Lys)-D-Leu [I, R = e.g., Me(CH<sub>2</sub>)<sub>n</sub>, n = 6,8, EtCHMe(CH<sub>2</sub>)<sub>4</sub>, Me<sub>2</sub>CHCH<sub>2</sub>SCH<sub>2</sub>CH<sub>2</sub>, PhCOCH<sub>2</sub>CH<sub>2</sub>, Ph<sub>2</sub>CH, 2-(2-furyl)vinyl] were tested against 15 bacteria and 5 had half the activity of colistin sulfate against gram-neg. bacteria. OHC-Lys(N. $\alpha$ .,N. $\epsilon$ -dibenzoyloxycarbonyl-L-lysine)-D-Leu-OMe was condensed with OHC-Lys(CO<sub>2</sub>CH<sub>2</sub>Ph)-Thr followed by deformylation, deesterification acylation with RCOCl, and debenzoxycarbonylation to give I.

IT 53917-68-3P 53917-69-4P 53917-70-7P

53917-71-8P 53917-72-9P 53917-73-0P

53917-74-1P 53917-75-2P 53917-76-3P

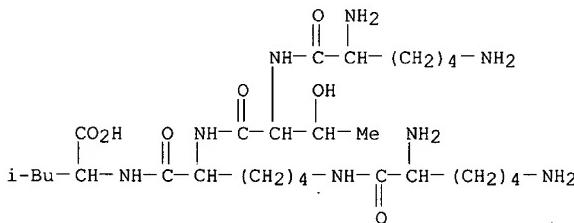
53917-77-4P 53917-78-5P 53917-79-6P

53947-75-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(prepn. and bactericidal activity of)

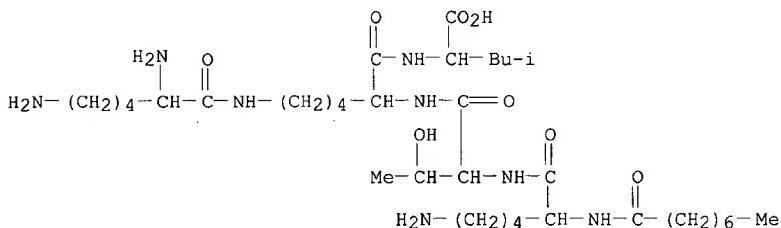
RN 53917-68-3 CAPLUS

CN D-Leucine, N-[N<sup>6</sup>-L-lysyl-N<sup>2</sup>-(N-L-lysyl-L-threonyl)-L-lysyl]-, tetrahydrochloride (9CI) (CA INDEX NAME)

● 4 HCl

RN 53917-69-4 CAPLUS

CN D-Leucine, N-[N<sup>6</sup>-L-lysyl-N<sup>2</sup>-[N-[N<sup>2</sup>-(1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

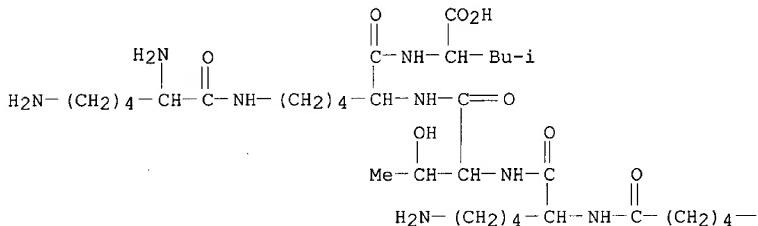


● 3 HCl

RN 53917-70-7 CAPLUS

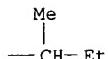
CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

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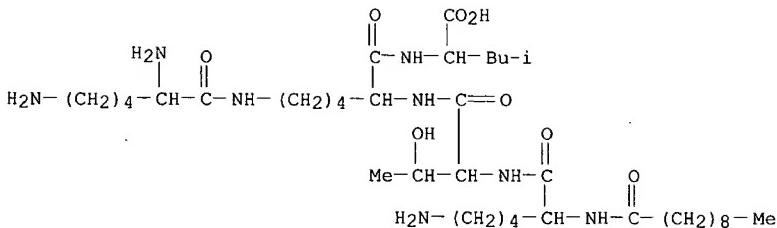
● 3 HCl

PAGE 1-B



RN 53917-71-8 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-(1-oxodecyl)-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

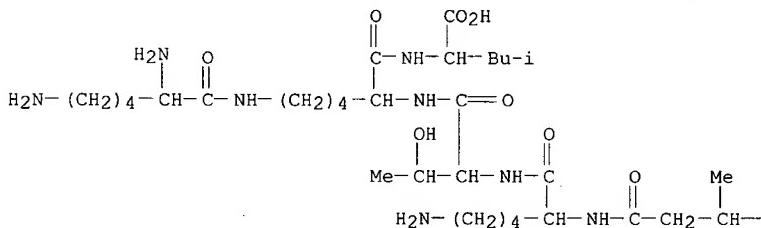


● 3 HCl

RN 53917-72-9 CAPLUS

CN D-Leucine, N-[N2-[N2-(3,7-dimethyl-1-oxooctyl)-L-lysyl]-L-threonyl]-N6-L-lysyl-L-lysyl-, trihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A



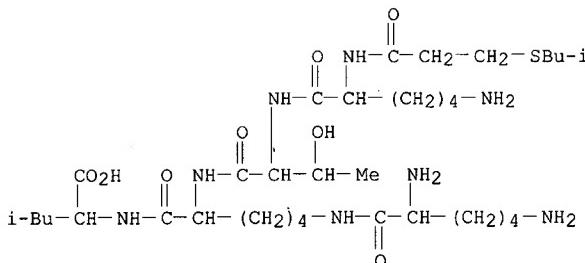
● 3 HCl

PAGE 1-B

— (CH<sub>2</sub>)<sub>3</sub>—CHMe<sub>2</sub>

RN 53917-73-0 CAPLUS

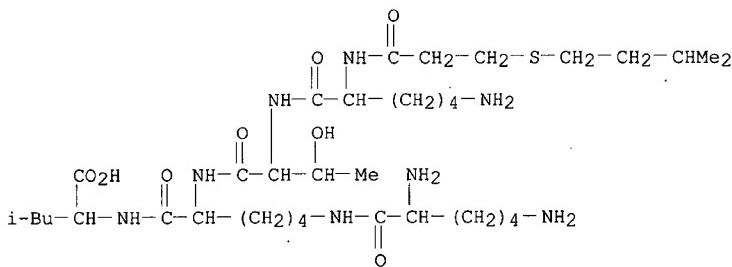
CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[3-[(2-methylpropyl)thio]-1-oxopropyl]-L-lysyl]-L-threonyl]-L-lysyl-, trihydrochloride (9CI) (CA INDEX NAME)



● 3 HCl

RN 53917-74-1 CAPLUS

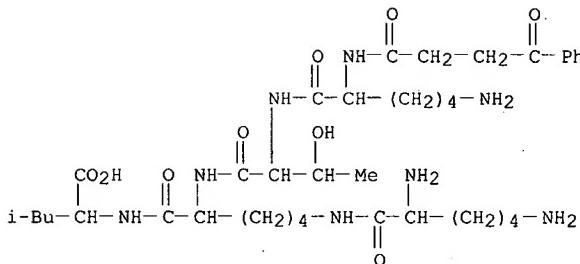
CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[3-[(3-methylbutyl)thio]-1-oxopropyl]-L-lysyl]-L-threonyl]-L-lysyl], trihydrochloride (9CI) (CA INDEX NAME)



● 3 HCl

RN 53917-75-2 CAPLUS

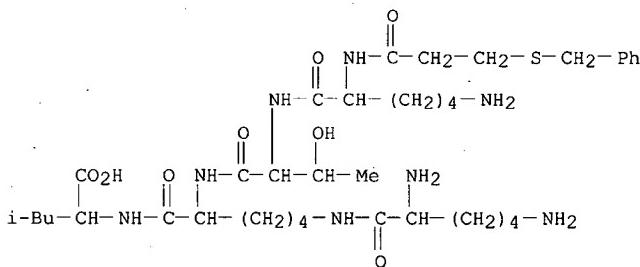
CN D-Leucine, N-[N2-[N-[N2-(1,4-dioxo-4-phenylbutyl)-L-lysyl]-L-threonyl]-N6-L-lysyl-L-lysyl], trihydrochloride (9CI) (CA INDEX NAME)



• 3 HCl

RN 53917-76-3 CAPLUS

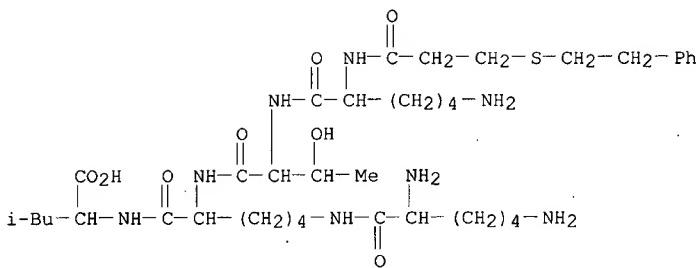
CN D-Leucine, N-[N<sup>6</sup>-L-lysyl-N<sup>2</sup>-[N-[N<sup>2</sup>-[1-oxo-3-[(phenylmethyl)thio]propyl]-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)



• 3 HCl

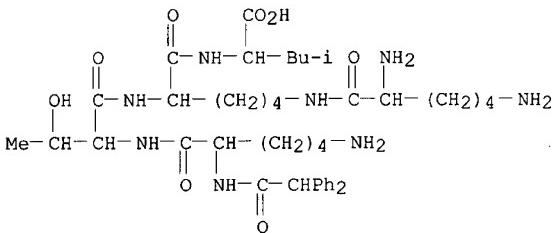
RN 53917-77-4 CAPLUS

CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[1-oxo-3-[(2-phenylethyl)thio]propyl]-L-lysyl]-L-threonyl]-L-lysyl], trihydrochloride (9CI) (CA INDEX NAME)



● 3 HCl

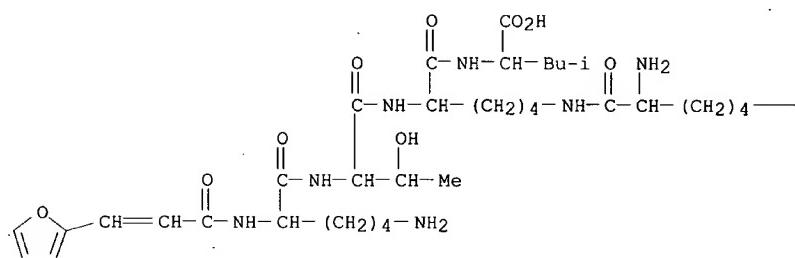
RN 53917-78-5 CAPLUS  
 CN D-Leucine, N-[N2-[N-[N2-(diphenylacetyl)-L-lysyl]-L-threonyl]-N6-L-lysyl-L-lysyl], trihydrochloride (9CI) (CA INDEX NAME)



● 3 HCl

RN 53917-79-6 CAPLUS  
 CN D-Leucine, N-[N2-[N-[N2-[3-(2-furanyl)-1-oxo-2-propenyl]-L-lysyl]-L-threonyl]-N6-L-lysyl-L-lysyl], trihydrochloride (9CI) (CA INDEX NAME)

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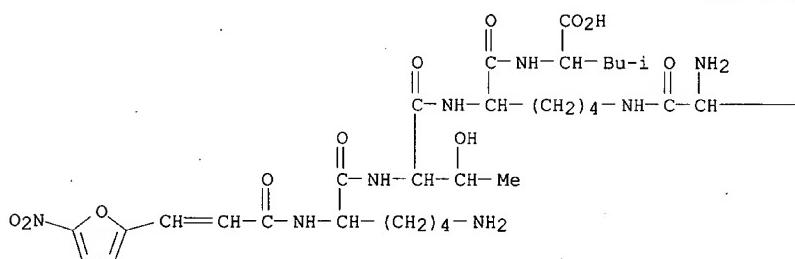
● 3 HCl

PAGE 1-B

—NH<sub>2</sub>

RN 53947-75-4 CAPLUS  
 CN D-Leucine, N-[N6-L-lysyl-N2-[N-[N2-[3-(5-nitro-2-furanyl)-1-oxo-2-propenyl]-L-lysyl]-L-threonyl]-L-lysyl]-, trihydrochloride (9CI) (CA INDEX NAME)

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● 3 HCl

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— (CH<sub>2</sub>)<sub>4</sub>—NH<sub>2</sub>

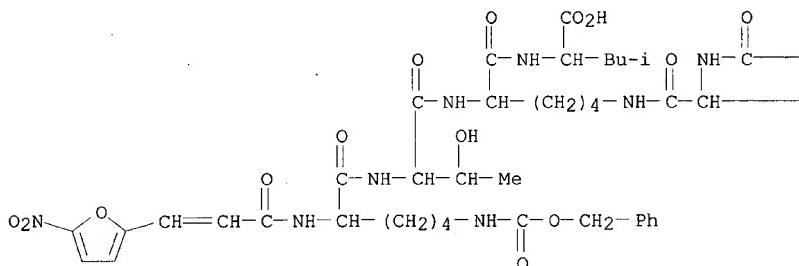
IT 54171-07-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prep. of)

RN 54171-07-2 CAPLUS

CN D-Leucine, N-[N2-[N-[N2-[3-(5-nitro-2-furanyl)-1-oxo-2-propenyl]-N6-  
[(phenylmethoxy)carbonyl]-L-lysyl]-L-threonyl]-N6-[N2-  
[(phenylmethoxy)carbonyl]-L-lysyl]-L-lysyl] - (9CI) (CA INDEX NAME)

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— O—CH<sub>2</sub>—Ph— (CH<sub>2</sub>)<sub>4</sub>—NH<sub>2</sub>

L13 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1973:148239 CAPLUS

DOCUMENT NUMBER: 78:148239

TITLE: Colistin analogues

INVENTOR(S): Kurihara, Tousaburo; Ito, Hideo; Takeda, Hideo

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 48005715	B4	19730124	JP 1971-39366	19710607
AB	The colistin analog I (Moa = EtCHMe(CH <sub>2</sub> ) <sub>4</sub> CO), with anti- bacterial activity, was prep'd. by fragment coupling using dicyclo-			

hexylcarbodiimide. Thus, Moa-Lys (Z)-Thr-Lys-(Z)-Lys-OMe (Z = PhCH<sub>2</sub>O<sub>2</sub>C) was coupled with CHO-Leu-Lys(Z)-Lys(Z)-Thr. After hydrolysis of the terminal ester group, the product was coupled with Lys(Z)-D-Leu-OMe and the protective groups removed to give 80% I.

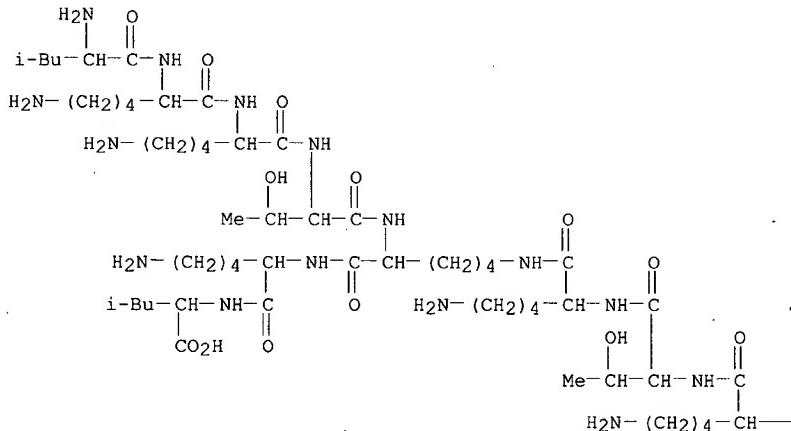
IT 40904-95-8P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

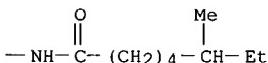
RN 40904-95-8 CAPLUS

CN D-Leucine, N-[N2-[N2-[N2-(N2-L-leucyl-L-lysyl)-L-lysyl]-L-threonyl]-N6-[N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-L-lysyl]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L13 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1972:419994 CAPLUS  
DOCUMENT NUMBER: 77:19994

TITLE: Compounds related to colistin. V. Synthesis and pharmacological activity of colistin analogs

AUTHOR(S): Kurihara, Tozaburo; Takeda, Hideo; Ito, Hideo

CORPORATE SOURCE: Tohoku Coll. Pharm., Sendai, Japan

SOURCE: Yakugaku Zasshi (1972), 92(2), 129-34

CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB A lysine-colistin, an analog of the natural antibiotic colistin, was synthesized by the cyclization of linear decapeptide obtained from acyl-tetrapeptide, formyl-tetrapeptide, and dipeptide by a stepwise reaction. Lysine-colistin as a new peptide contg. six moles of lysine instead of six moles of .alpha.,.gamma.-diaminobutyric acid in colistin. Lysine-colistin and linear acyl-decapeptide had the same antibiotic activity as colistin against many gram-neg. bacteria.

IT 36703-38-5P

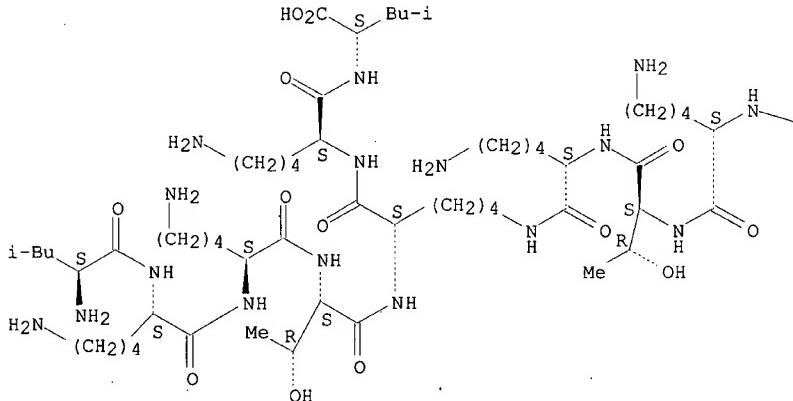
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(prepn. and antibacterial activity of)

RN 36703-38-5 CAPLUS

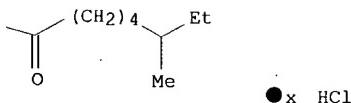
CN L-Leucine, N-[N2-[N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-N6-[N2-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl]-L-lysyl], hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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IT 36735-92-9P

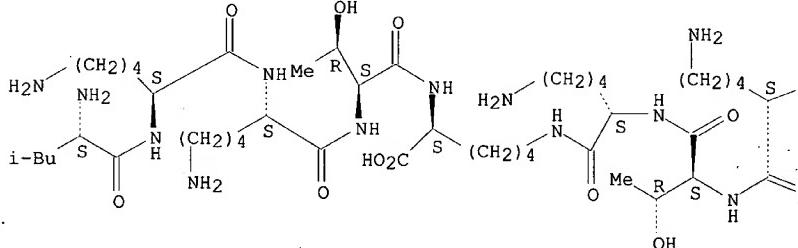
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)

RN 36735-92-9 CAPLUS

CN L-Lysine, N2-[N-(N2-(N2-L-leucyl-L-lysyl)-L-lysyl]-L-threonyl]-N6-[N-[N2-(6-methyl-1-oxooctyl)-L-lysyl]-L-threonyl]-L-lysyl-, hydrochloride  
(9CI) (CA INDEX NAME)

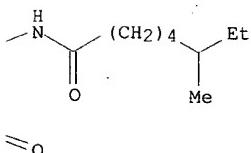
Absolute stereochemistry.

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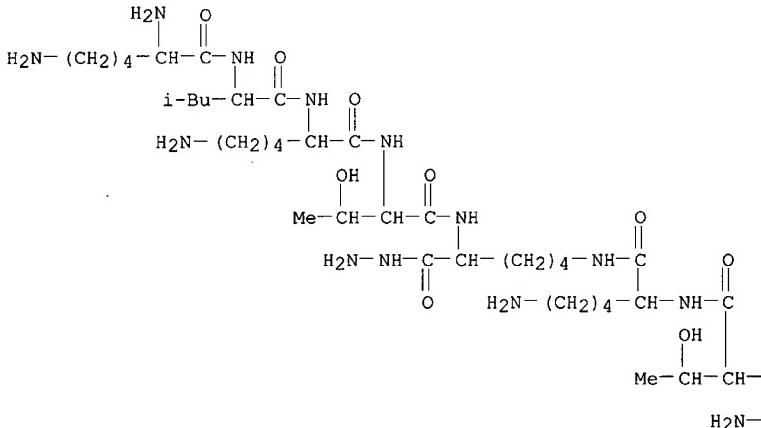
x HCl

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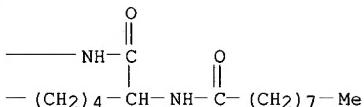


ACCESSION NUMBER: 1969:491861 CAPLUS  
 DOCUMENT NUMBER: 71:91861  
 TITLE: Synthesis of a fragment of a lysine analog of polymyxin M. Pelargonyl-L-lysyl-L-threonyl-L-lysyl-Ne-(L-lysyl-D-leucyl-L-lysyl-L-threonyl)-L-lysine hydrazide  
 AUTHOR(S): Oksenoit, E. S.; Morozova, E. A.; Gorbacheva, E. N.; Fokina, E. E.  
 CORPORATE SOURCE: USSR  
 SOURCE: Zhurnal Obshchey Khimii (1969), 39(7), 1654  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB To 0.27 g. N.alpha.-tert-butoxycarbonyl-N. epsilon.-carbobenzoxy-L-lysyl-D-leucyl-N-carbobenzoxy-L-lysyl-L-threonine hydrazide (m. 140-2.degree.) in EtOAc and 3N HCl was added at -10.degree.3 mg. NaNO<sub>2</sub> and after 10 min. the org. ext. yielded a soln. of the corresponding azide, which treated in situ with N.alpha.-pelargonyl-N. epsilon.-carbobenzoxy-L-lysyl-L-threonyl-N. epsilon.-carbobenzoxy-L-lysyl-L-lysine Me ester in EtOAc at -10.degree. gave in days, finally at room temp., 81% N.alpha.-pelargonyl-N. epsilon.-carbobenzoxy-L-lysyl-L-threonyl-N. epsilon.-carbobenzoxy-L-lysyl-N. epsilon.- (N.alpha.-tert-butoxycarbonyl-N. epsilon.-carbobenzoxy-L-lysyl-D-leucyl-N. epsilon.-carbobenzoxy-L-lysyl-L-threonyl)-L-lysine Me ester, m. 140.3.degree., [.alpha.]<sub>20D</sub> -12.3.degree.. This with N<sub>2</sub>H<sub>4</sub> in MeOH, finally at 60.degree., gave in 5 hrs. the corresponding hydrazide, m. 170-5.degree., [.alpha.]<sub>20D</sub> -13.7.degree., which was hydrogenated in AcOH over Pd black to the title compd., m. 74.degree., [.alpha.]<sub>20D</sub> -25.45.degree.. Its compn. was verified by hydrolysis.  
 IT 23816-18-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prep. of)  
 RN 23816-18-4 CAPLUS  
 CN Lysine, N6-[N-[N2-(N-L-lysyl-D-leucyl)-L-lysyl]-L-threonyl]-N2-[N2-[N-(N2-nonenoyl-L-lysyl)-L-threonyl]-L-lysyl], hydrazide, L- (8CI) (CA INDEX NAME)

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L13 ANSWER 12 OF 12 USPATFULL

ACCESSION NUMBER: 2002:149295 USPATFULL

TITLE: Therapeutic pore-forming peptides

INVENTOR(S): Yu, Xianxhang, Mauldin, SC, UNITED STATES  
Wagner, Thomas E., Greer, SC, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002077454	A1	20020620
APPLICATION INFO.:	US 2001-851422	A1	20010509 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-203063P	20000509 (60)
	US 2000-212042P	20000616 (60)

DOCUMENT TYPE: Utility  
 FILE SEGMENT: APPLICATION  
 LEGAL REPRESENTATIVE: Charles F. Schill, FOLEY & LARDNER, Washington Harbour,  
 3000 K Street, N.W., Suite 500, Washington, DC,  
 20007-5109

NUMBER OF CLAIMS: 19

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 5 Drawing Page(s)

LINE COUNT: 1023

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A class of procytotoxic agents is characterized by a capability to kill with target cell-specificity. Such an aspect can be a pore-forming protein which has at least one lysine residue, modified by a peptide linkage to an amino acid residue, via the epsilon amino group. These agents are useful in treating cancer, especially prostate cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 374107-25-2 374107-26-3 374107-27-4  
 (antitumor pore-forming procytotoxic peptides)

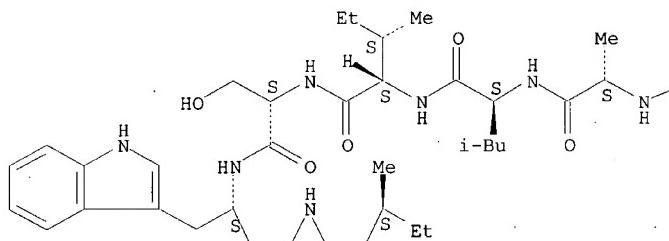
RN 374107-25-2 USPATFULL

CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-

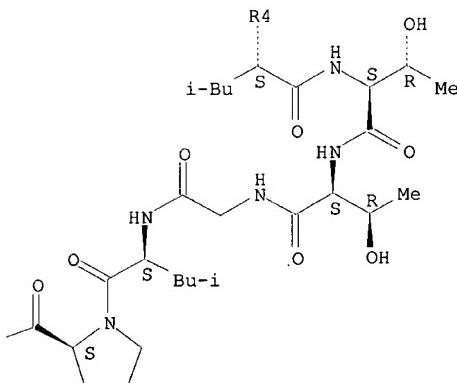
proyl-L-alanyl-L-leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-L-arginyl-L-lysyl-L-arginyl-N6-L-arginyl-L-lysyl-L-arginyl-L-glutaminylyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

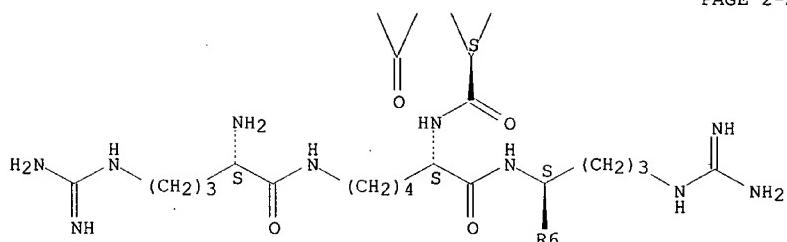
PAGE 1-A



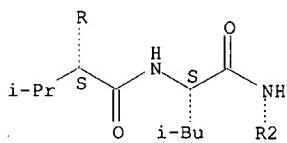
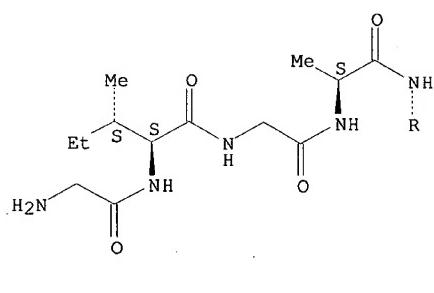
PAGE 1-B



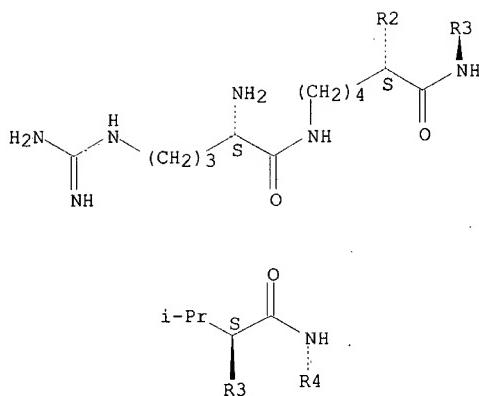
PAGE 2-A



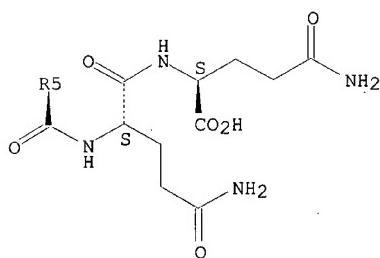
PAGE 3-A



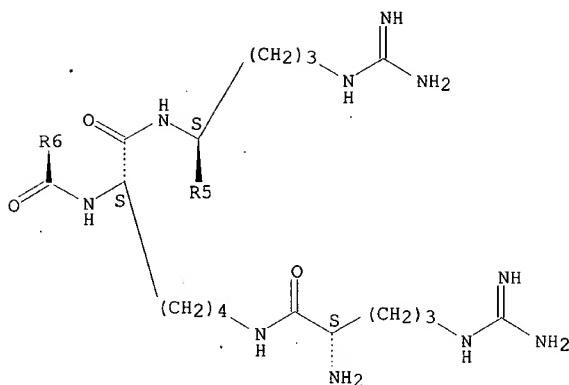
PAGE 4-A



PAGE 5-A



PAGE 6-A'

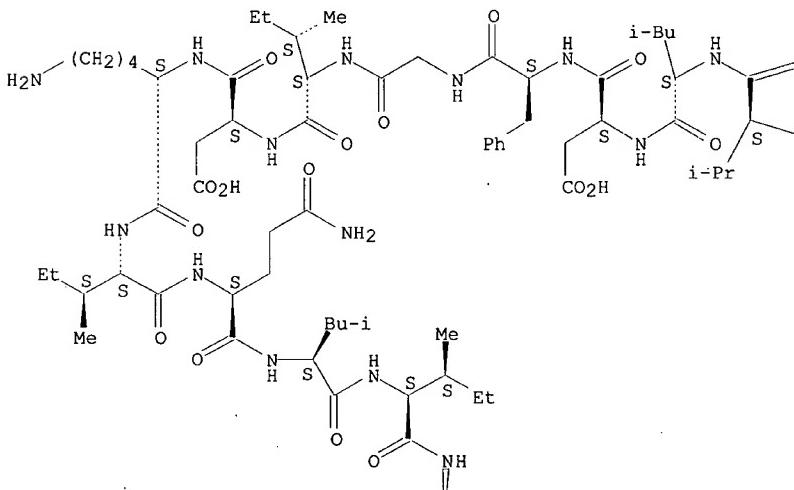


RN 374107-26-3 USPATFULL

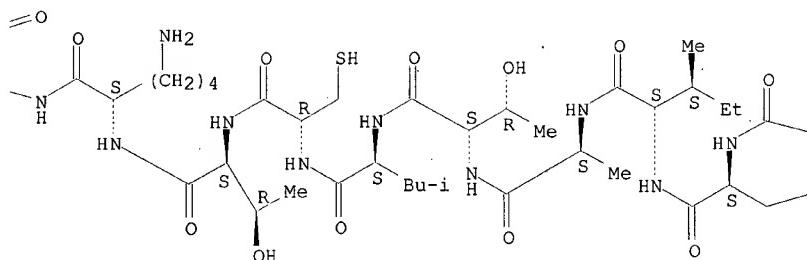
CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-L-lysyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



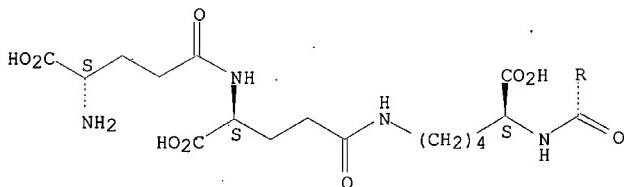
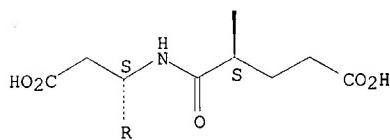
PAGE 1-B



PAGE 1-C



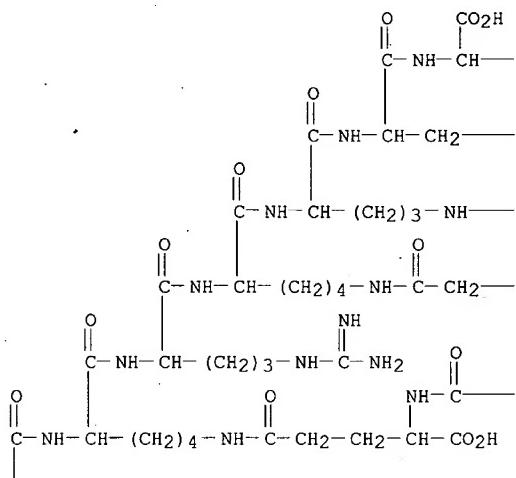
PAGE 2-A



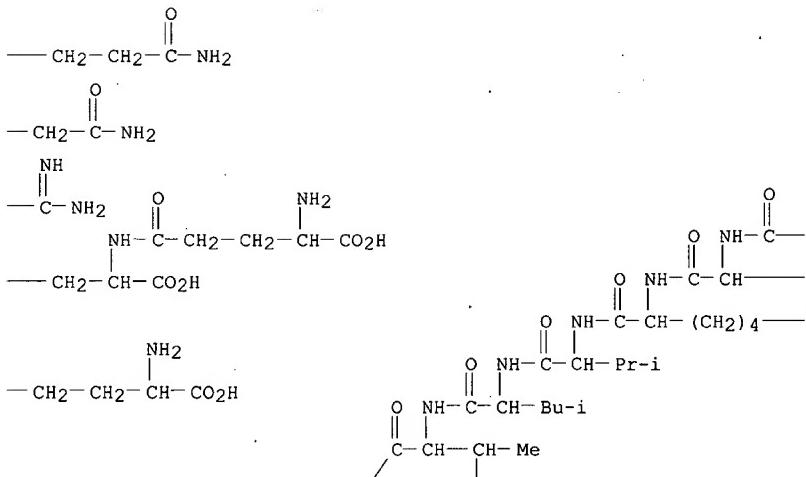
RN 374107-27-4 USPATFULL  
 CN L-Glutamine, glycyl-L-isoleucylglycyl-L-alanyl-L-valyl-L-leucyl-L-lysyl-L-  
 valyl-L-leucyl-L-threonyl-L-threonylglycyl-L-leucyl-L-prolyl-L-alanyl-L-  
 leucyl-L-isoleucyl-L-seryl-L-tryptophyl-L-isoleucyl-N6-(L-.gamma.-)

glutamyl-L-.gamma.-glutamyl)-L-lysyl-L-arginyl-N6-(L-.gamma.-glutamyl-L-.gamma.-glutamyl)-L-lysyl-L-arginyl-L-glutaminyl- (9CI) (CA INDEX NAME)

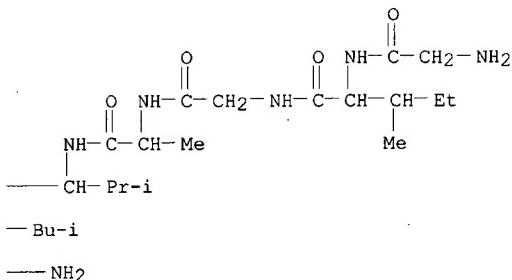
## PAGE 1-A



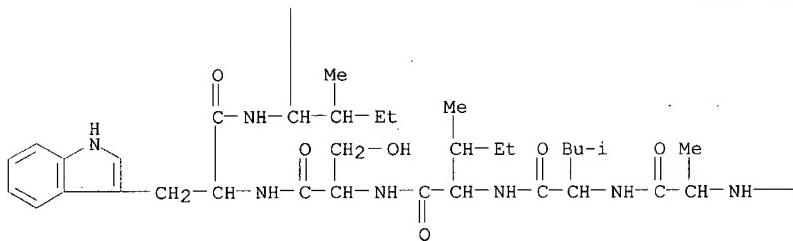
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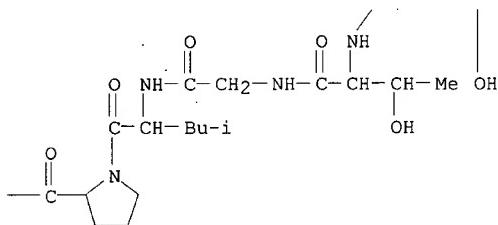
PAGE 1-C



PAGE 2-A



PAGE 2-B



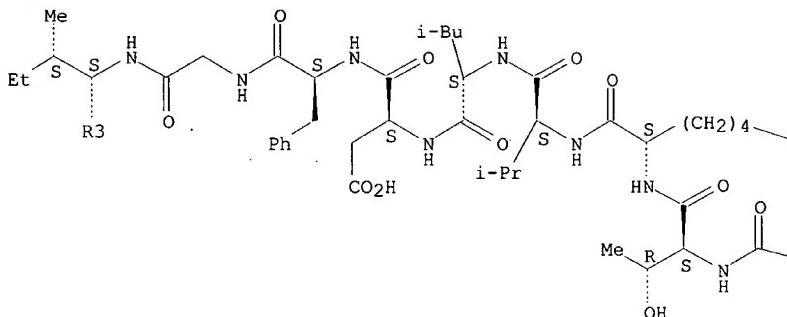
IT 374107-13-8 374107-15-0 374107-16-1  
 374107-17-2 374107-18-3 374107-19-4  
 374107-20-7 374107-21-8 374107-22-9  
 374107-23-0 374107-24-1  
 (antitumor pore-forming procytotoxic peptides)

RN 374107-13-8 USPATFULL  
 CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N<sub>6</sub>-L-.gamma.-glutamyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N<sub>6</sub>-L-.gamma.-glutamyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-

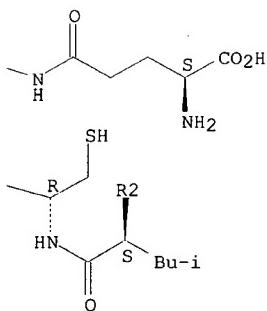
isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-.gamma.-glutamyl-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

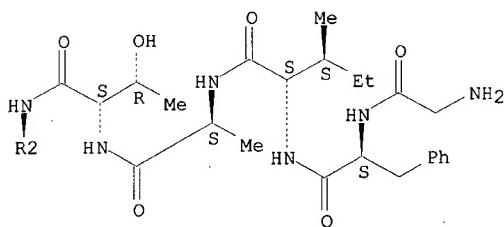
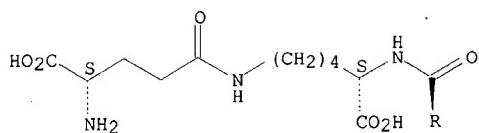
PAGE 1-A



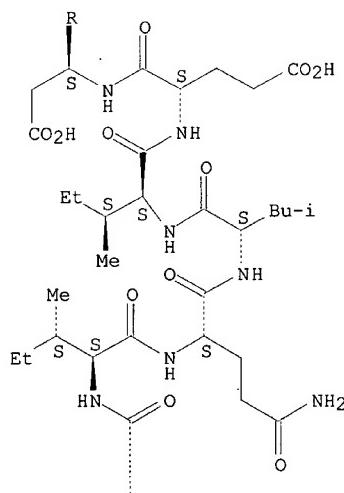
PAGE 1-B



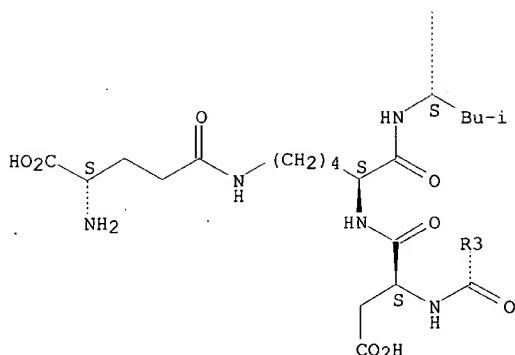
PAGE 2-A



PAGE 3-A



PAGE 4-A

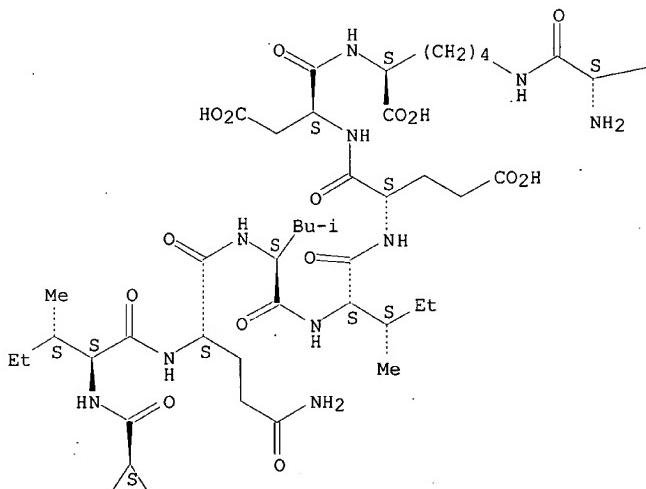


RN 374107-15-0 USPATFULL

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(CA INDEX NAME)

Absolute stereochemistry.

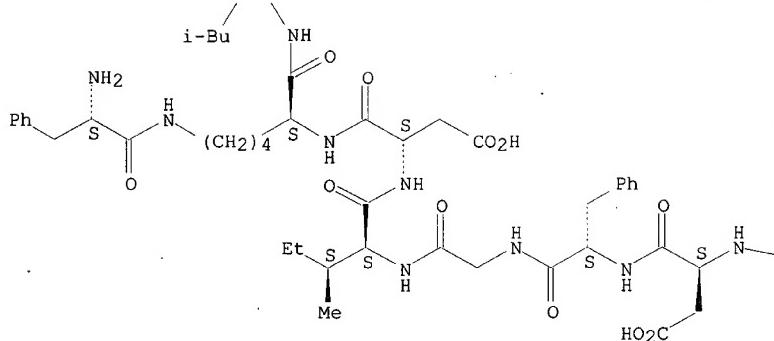
PAGE 1-A



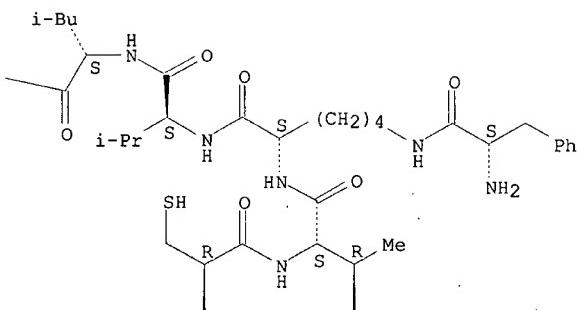
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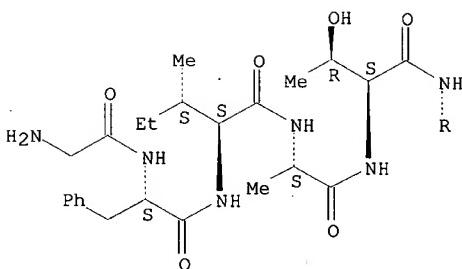
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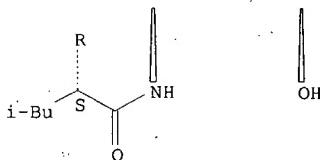
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PAGE 3-A



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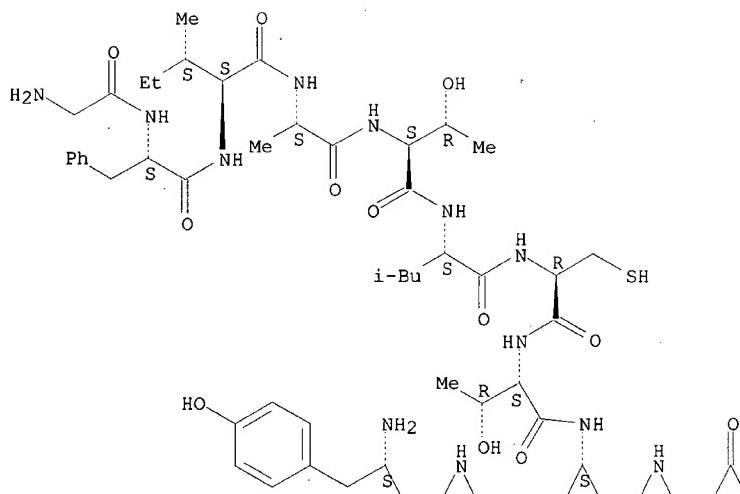


RN 374107-16-1 USPATFULL

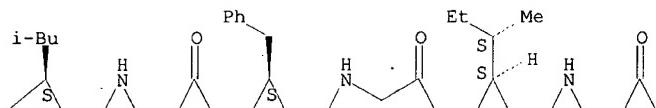
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Absolute stereochemistry.

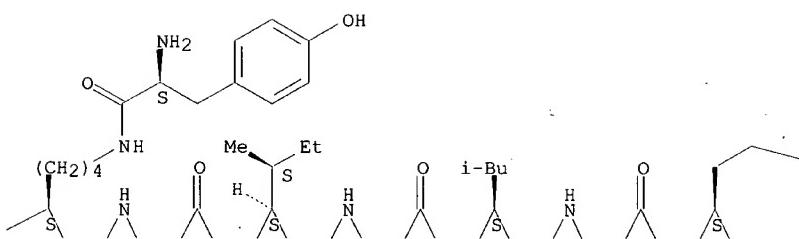
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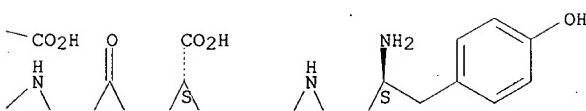
PAGE 1-B

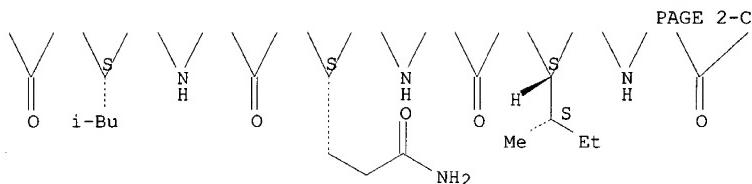
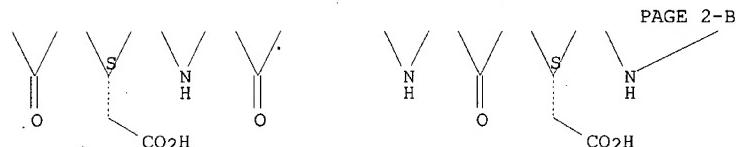
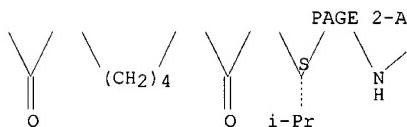


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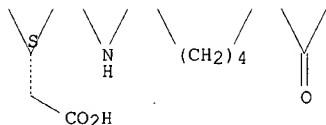


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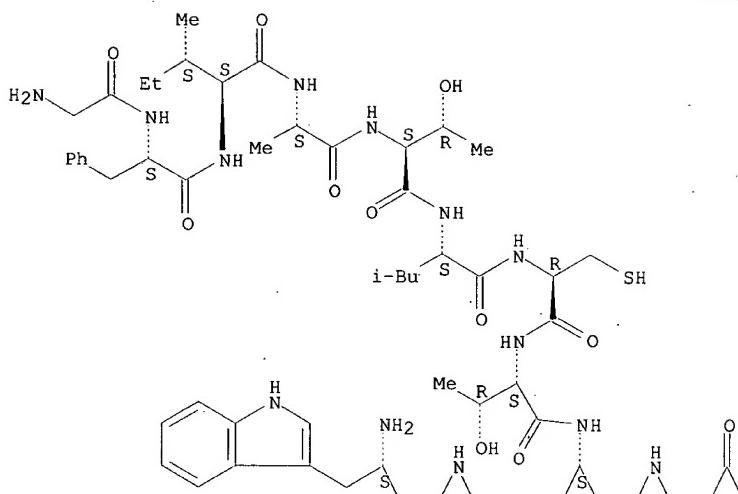
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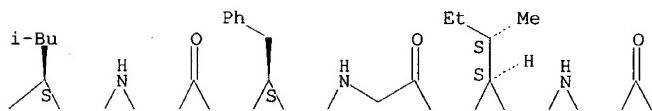
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 (CA INDEX NAME)

Absolute stereochemistry.

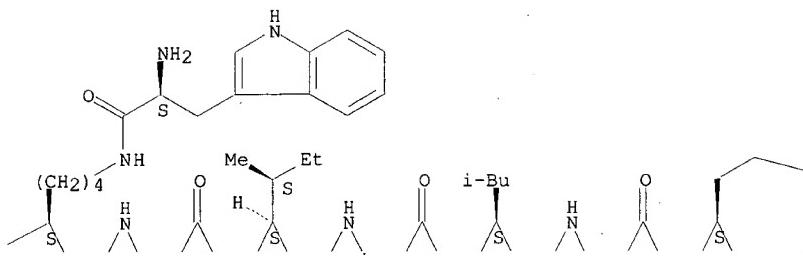
PAGE 1-A



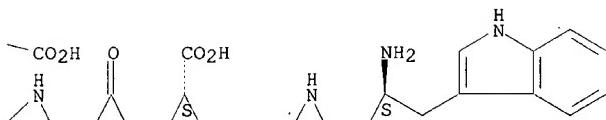
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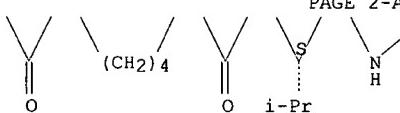
PAGE 1-C



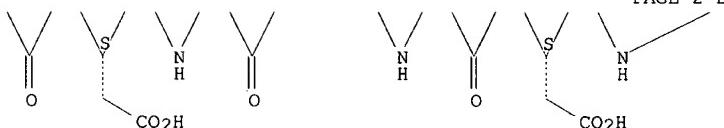
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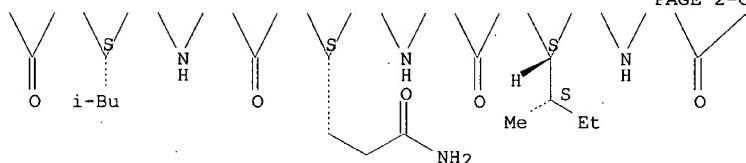
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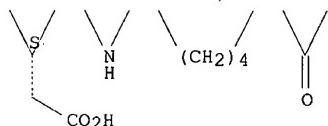
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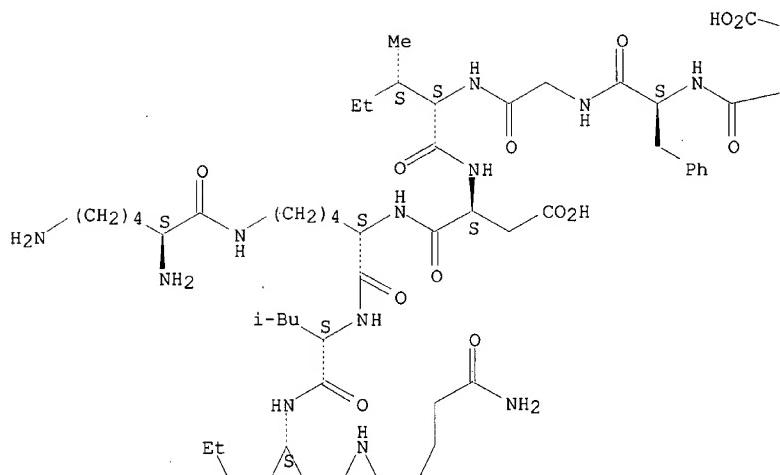


RN 374107-18-3 USPATFULL

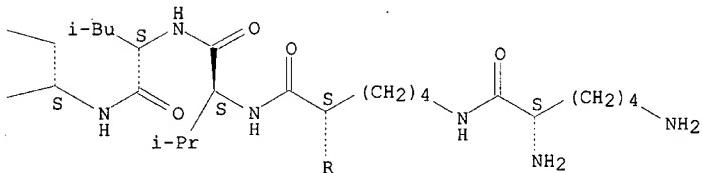
CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-lysyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-lysyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutaminyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-lysyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

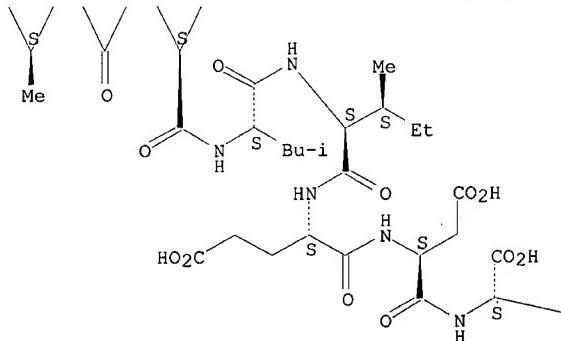
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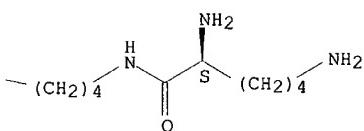
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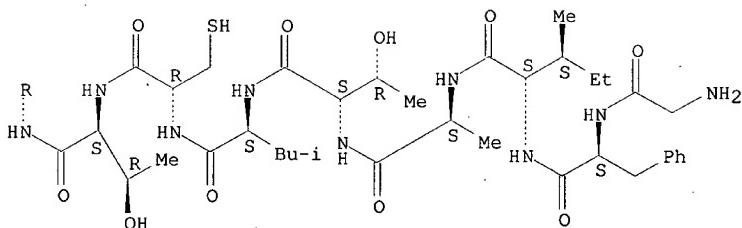
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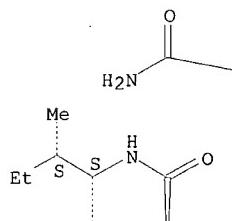
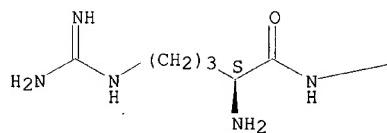


RN 374107-19-4 USPATFULL

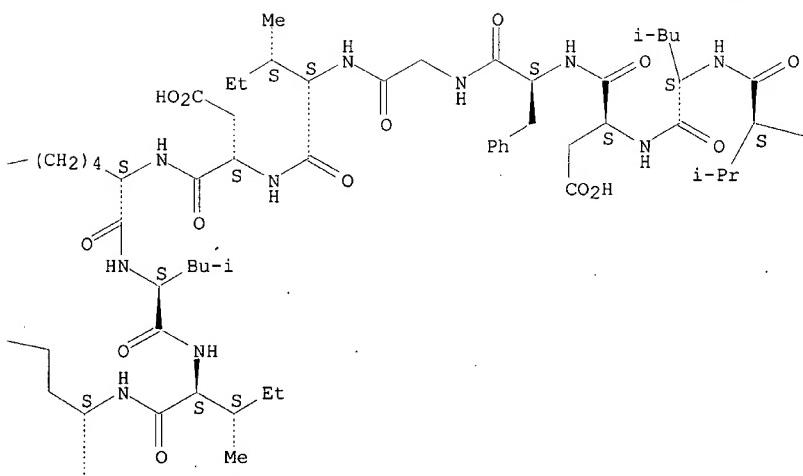
CN L-Lysine, glycyl-L-phenylalanyl-L-isoleucyl-L-alanyl-L-threonyl-L-leucyl-L-cysteinyl-L-threonyl-N6-L-arginyl-L-lysyl-L-valyl-L-leucyl-L-.alpha.-aspartyl-L-phenylalanylglycyl-L-isoleucyl-L-.alpha.-aspartyl-N6-L-arginyl-L-lysyl-L-leucyl-L-isoleucyl-L-glutamyl-L-leucyl-L-isoleucyl-L-.alpha.-glutamyl-L-.alpha.-aspartyl-N6-L-arginyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

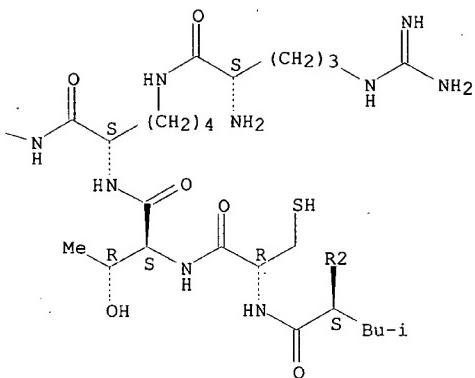
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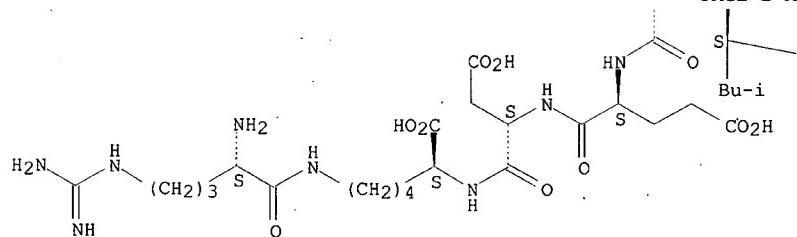
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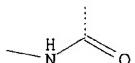
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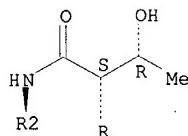
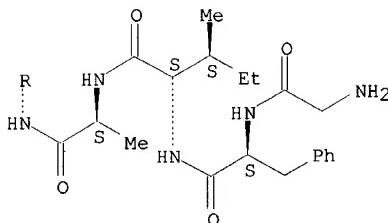
PAGE 2-A



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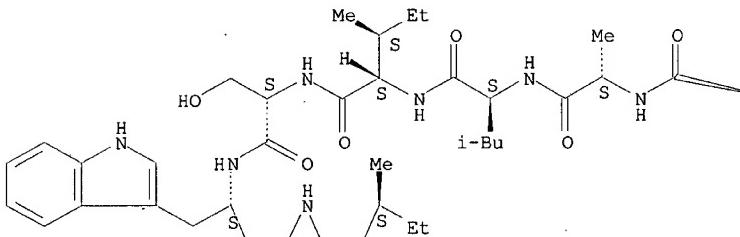


RN 374107-20-7 USPATFULL

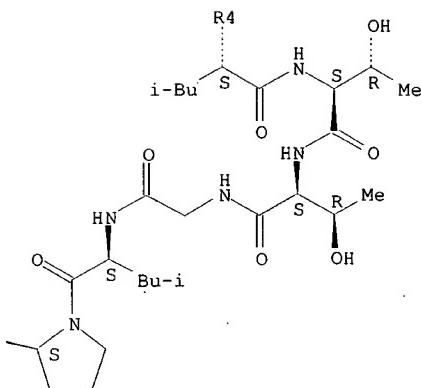
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Absolute stereochemistry.

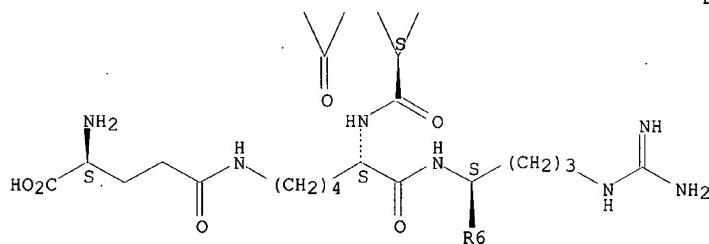
PAGE 1-A



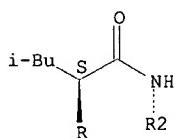
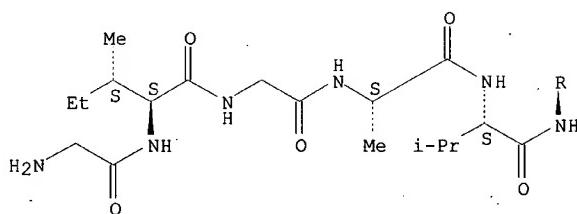
PAGE 1-B



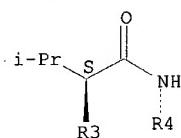
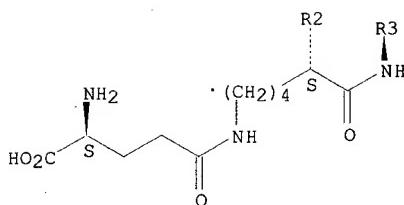
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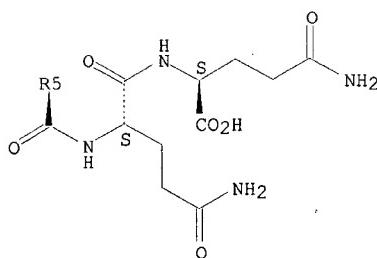
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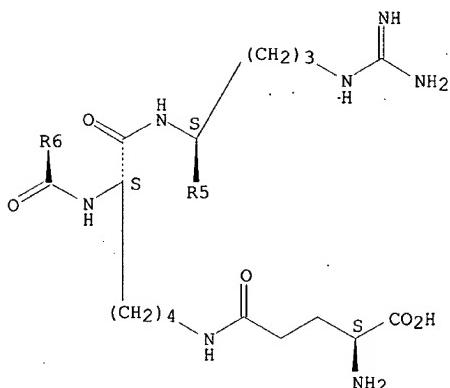
PAGE 4-A



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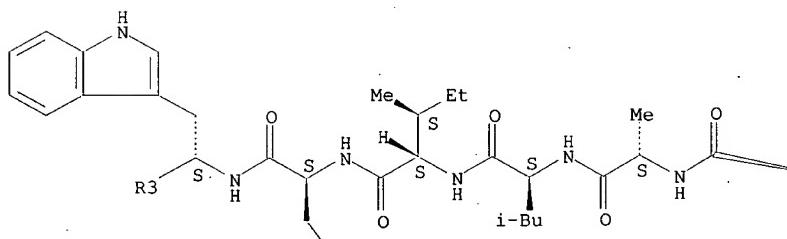


RN 374107-21-8 USPATFULL

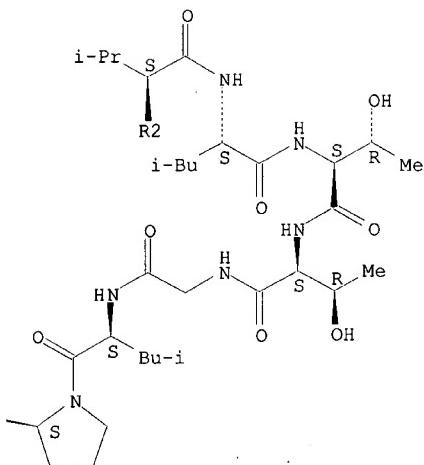
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Absolute stereochemistry.

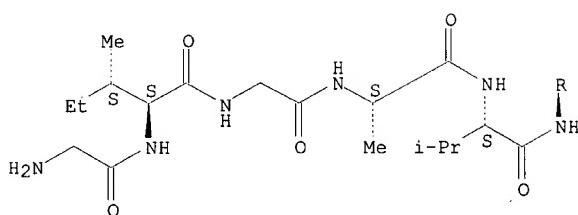
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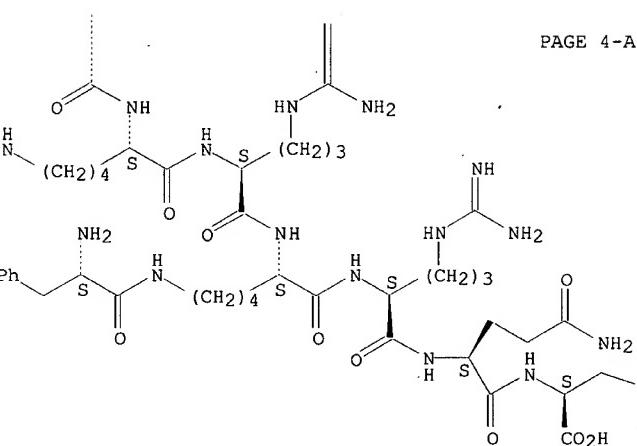
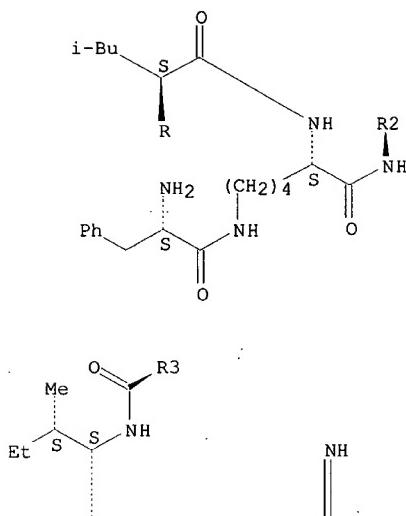
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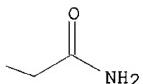
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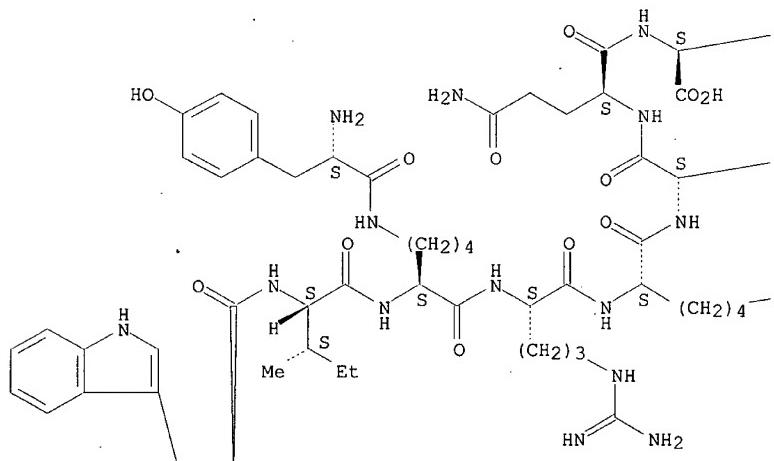
PAGE 4-B



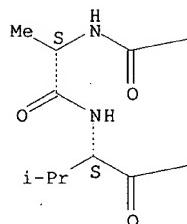
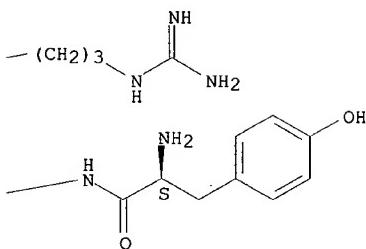
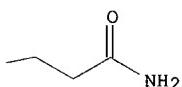
RN 374107-22-9 USPATFULL  
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Absolute stereochemistry.

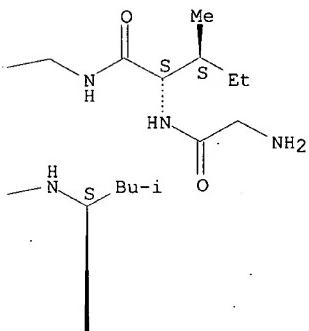
PAGE 1-A



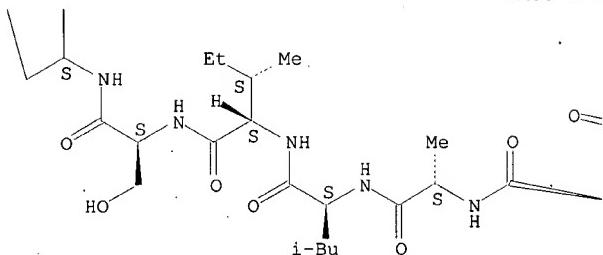
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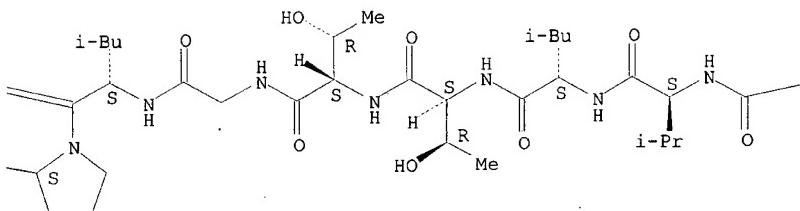
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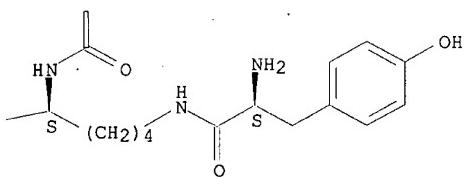
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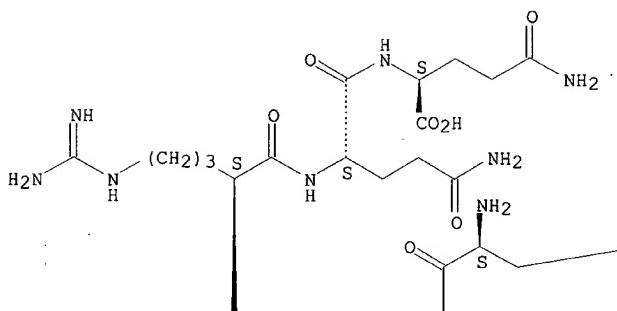
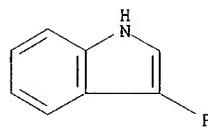


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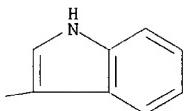
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Absolute stereochemistry.

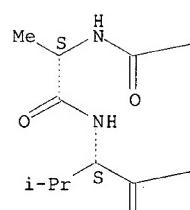
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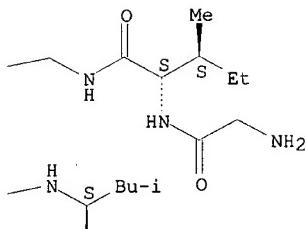
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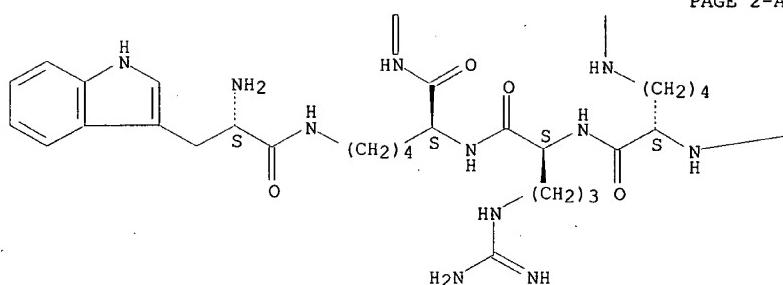
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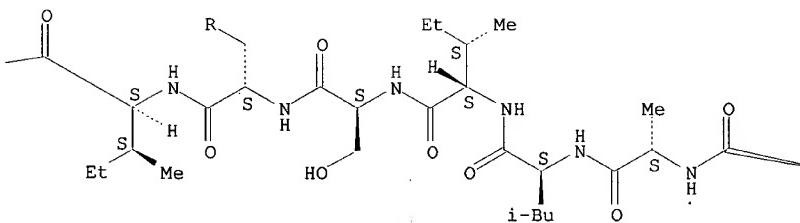
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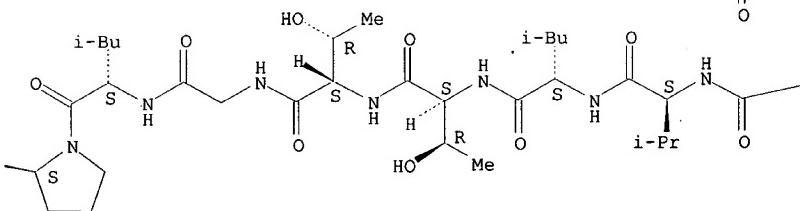
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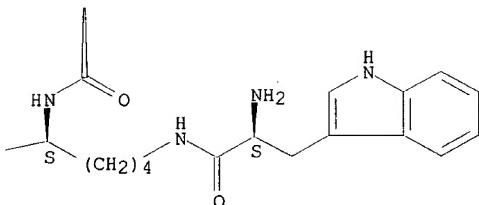
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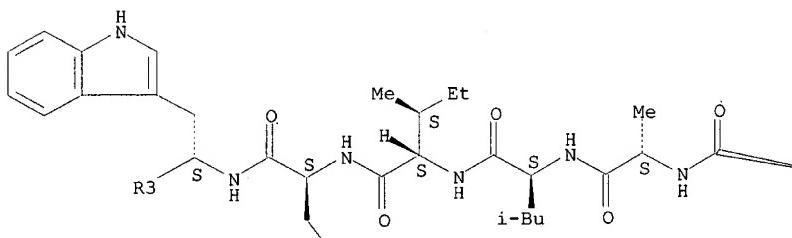


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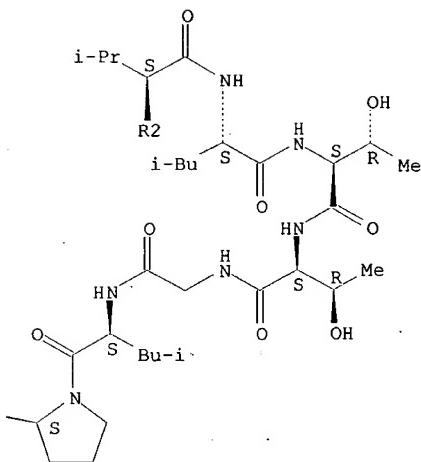
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Absolute stereochemistry.

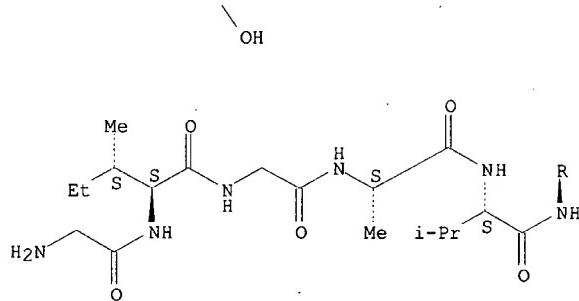
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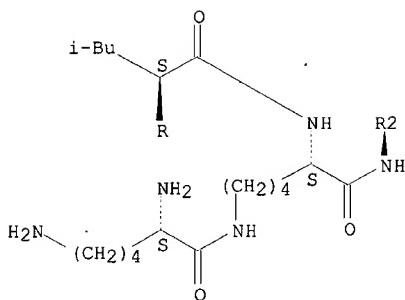
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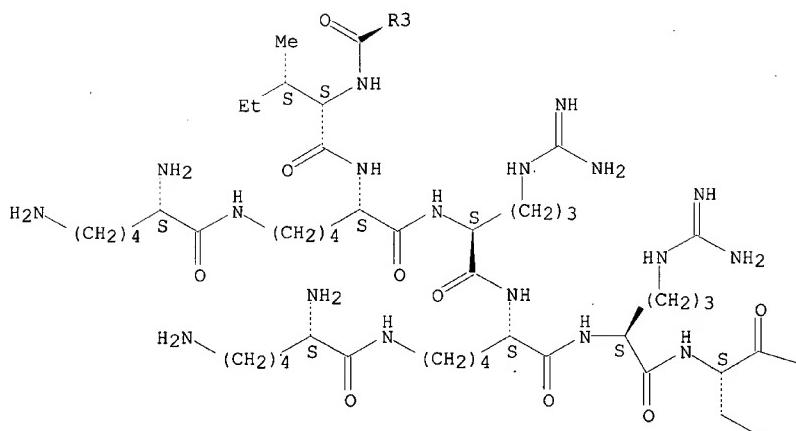
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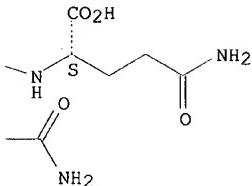
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PAGE 4-A



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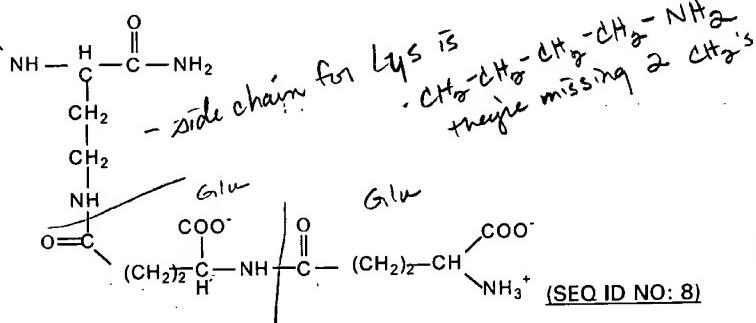
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Example 2: Assay for the cytolytic activity of the pore-forming toxins

Marked up version of paragraph [0076], on page 28, is below:

[0076] This example demonstrates that the inventive  $\gamma$ -glutamate-masked cytolytic peptides have specificity for cancer cells other than those expressing PSMA. This experiment, utilized a melittin analog having A [ $\epsilon$ - $\gamma$ ]-Glu-[ $\alpha$ - $\gamma$ ]-Glu at each of lysines 21 and 23: NH<sub>2</sub>-Gly-Ile-Gly-Ala-Val-Leu-Lys-Val-Leu-Thr-Thr-Gly-Leu-Pro-Ala-Leu-Ile-Ser-Trp-Ile-Lys([ $\epsilon$ - $\gamma$ ]-Glu-[ $\alpha$ - $\gamma$ ]-Glu)-Arg-Lys([ $\epsilon$ - $\gamma$ ]-Glu-[ $\alpha$ - $\gamma$ ]-Glu)-Arg-Gln-Gln-COOH (SEQ ID NO: 12). Two prostate tumors (PNCap and DU0145), two ovarian tumors (HeLa and SK-OV-3), one lung tumor (LLC1) and one melanoma (B16) were tested. Cultured cells were treated with 1, 10, 50 or 100  $\mu$ M peptide. Results, depicted in Figure 4, show strong lytic activity against all tumors.

#### In the Claims:

Please amend the claims as follows:

5. (Amended) The procytotoxin of claim 4, having the following structure: Gly-Phe-Ile-Ala-Thr-Leu-Cys-Thr-Lys(R)-Val-Leu-Asp-Phe-Gly-Ile-Asp-Lys(R)-Leu-Ile-Gln-Leu-Ile-Glu-Asp-Lys(R) (SEQ ID NO: 1), wherein R is independently selected from the group consisting of the unmodified  $\epsilon$ -amino group of the adjacent lysine residue, [ $\epsilon$ - $\gamma$ ]-Glu, [ $\epsilon$ - $\gamma$ ]-

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